

# The Gun Digest® Book of **SIG-SAUER**

**A COMPLETE LOOK AT SIG-SAUER PISTOLS**



- **Design**
- **Function**
- **Craftsmanship**

**Massad Ayoob**

**Gun Digest® Book of  
SIG-SAUER**

**A COMPLETE LOOK AT SIG-SAUER  
PISTOLS**

**Massad Ayoob**

**Thank you for purchasing this *Gun Digest* eBook.**

Sign up for our newsletter and receive special offers, access to free content, and information on the latest new releases and must-have firearms resources! Plus, receive a coupon code to use on your first purchase from GunDigestStore.com for signing up.

**Sign Up Here**

or visit us online to sign up at  
[\*http://gundigest.com/ebook-promo\*](http://gundigest.com/ebook-promo)

©2004 Massad Ayoob

Published by



**700 East State Street • Iola, WI 54990-0001**

**715-445-2214 • 888-457-2873**

**[www.krause.com](http://www.krause.com)**

Our toll-free number to place an order or obtain  
a free catalog is (800) 258-0929.

All rights reserved.

No portion of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopy, recording, or any information storage and retrieval system, without permission in writing from the publisher, except by a reviewer who may quote brief passages in a critical article or review to be printed in a magazine or newspaper, or electronically transmitted on radio, television, or on the internet.

Library of Congress Catalog Number: 2004100728

ISBN: 0-87349-755-4

eISBN: 978-1-44022-486-7



Edited by Kevin Michalowski  
Designed by Patsy Howell

Printed in U.S.A.

## *Acknowledgments*

My friend Rich Davis, who saved thousands of lives (including mine) when he invented soft body armor, is fond of repeating something he learned in the Marine Corps: “No one person can do it alone.” That was certainly true in the preparation of the *Gun Digest Book of the SIG-Sauer*.

On the publication side, I want to thank Don Gulbrandsen, who had the confidence in me to assign me to do this book. I hope I haven’t let him down. And big thanks to my editor Kevin Michalowski, who also edited *Gun Digest Book of a Combat Handgunnery, Fifth Edition*. He’s a professional. Appreciation also goes to the gun magazine editors who granted me permission to reprint here some things I had done for them: Jim Gardner at *GUNS*, Roy Huntington at *American Handgunner*, Harry Kane at Harris Publications, and Ben Battles at *On Target* magazine.

On the mechanics of the SIG-Sauer, big thanks to Joe Kiesel at SIGARMS. His co-workers call him “Kiesel the Diesel,” and no one knows more about the history and the inside dope on manufacturing these pistols. Joe is the Technical Director at SIGARMS. Many thanks also to ace SIG pistolsmiths Ernest Langdon and John Quintrall, and master armorer Rick Devoid, for their very significant input and sound advice.

At SIGARMS, there are more people to thank than there is room to name. All have been wonderfully cooperative. In addition to Joe, Matt McLearn (head of the GSR project) and Dana Owen in Law Enforcement Sales have always been very helpful. Laura Burgess was extraordinarily helpful, and one of the best public relations people I’ve been privileged to work with in the firearms industry. I wish her well in her new career as a freelance PR consultant. Paul Erhard, her replacement, had just come on board when I was finishing this book, and his efforts are also much appreciated. When Ted Rowe was the man at SIGARMS, I could always reach him by phone, and always found him honest and forthright. He’s now at Sturm, Ruger and SIG’s loss is Ruger’s gain.

SIGARMS Academy is the part of the company that teaches what to do with the product when the rubber meets the road, and I’ve always been impressed with their professionalism. During the many years that Bank Miller, former chief firearms instructor of the DEA, ran the Academy, we

were always able to work together helpfully and professionally despite the fact that I was director of a competing firearms academy only 45 minutes away. When I was a guest instructor at the DEA Academy in Quantico, Bank's name was still spoken of with reverence there. Star instructor George Harris has been unstinting in his advice and commentary, and altogether too modest about his own significant accomplishments as a competitive shooter. Thanks also to Wes Doss, a competent shooter, writer, and instructor who allowed me to photograph him demonstrating some techniques for this book on the SIGARMS Academy range.

On my own staff at Lethal Force Institute, thanks go to instructors Steve Denney, Rick Devoid, Mike Izumi, Andy Kemp, Dennis Luosey and Jeff Williams, and assistant instructors Sally Bartoo, Tara and Al Miller, and Steve Sager.

Acknowledgment needs to be made to the many experts who are quoted in this book, most of whom I know and am proud to call friends. They include Peter Brookesmith, Ray Chapman, Wiley Clapp, Dean Grennell, Roy Huntington, Chuck Karwan, Richard Law, Evan Marshall, Tim Mullin, Walt Rauch, Ed Sanow, Ned Schwing, Dave Spaulding, Chuck Taylor, and Duane Thomas. Go back through the footnotes, and hit me with a rolled-up SIGARMS catalog if I missed any.

I can't name the people who gave me inside stuff on the JSSAP's exhaustive test of SIG versus Beretta, nor the SEALs and SAS guys who told me how much they liked the SIG P226, and why. Police instructors aren't supposed to be seen as endorsing products, so I can't publicly name most of them who gave me input on their departments' long and extensive experience with these guns. These people know who they are, and I say to them now: "Thank You!"

Perhaps most of all I want to thank the countless cops, servicemen, and armed citizens who have gone through my Lethal Force Institute classes with SIG-Sauer pistols. Each of them was a piece in the jigsaw puzzle of what I was able to put together in this book about how these guns work in many different hands. It's good to know that those SIG-Sauer bearing hands belong to a wide variety of good men and women who use them in the righteous cause of the protection of the innocent.

Massad Ayoob  
Concord, NH USA  
November 2003

## ***Contents***

[Title Page](#)

[Special Offers](#)

[\*\*Introduction\*\*](#)

[Chapter 1](#)

[\*\*The SIG P220\*\*](#)

[Chapter 2](#)

[\*\*The SIG P225\*\*](#)

[Chapter 3](#)

[\*\*The SIG P226\*\*](#)

[Chapter 4](#)

[\*\*The SIG P228\*\*](#)

[Chapter 5](#)

[\*\*The SIG P229\*\*](#)

[Chapter 6](#)

[\*\*The SIG .380s: The P232 and P230\*\*](#)

[Chapter 7](#)

[\*\*The SIG P239\*\*](#)

[Chapter 8](#)

[\*\*The SIG P245\*\*](#)

[Chapter 9](#)

[\*\*The sig.pro\*\*](#)

[Chapter 10](#)

[\*\*SIGs That Are Sweet, Not Sauer\*\*](#)

[Chapter 11](#)

[\*\*SIGARMS' Hammerli Trailside\*\*](#)

[Chapter 12](#)

[\*\*GSR: The SIG 1911\*\*](#)

[Chapter 13](#)

[\*\*Manipulation of the Pistol\*\*](#)

[Chapter 14](#)

[\*\*Shooting the SIG-Sauer Pistol\*\*](#)

[Chapter 15](#)

[\*\*Holstering the SIG-Sauer\*\*](#)

[Chapter 16](#)

[\*\*Don't Let Your SIG Go Sour\*\*](#)

[Chapter 17](#)

[\*\*The Custom SIG\*\*](#)

[Chapter 18](#)

[\*\*Competing with the SIG\*\*](#)

[Chapter 19](#)

[\*\*The SIG in Training\*\*](#)

[Chapter 20](#)

[\*\*Ammunition for the SIG-Sauer\*\*](#)

[\*\*About the Author\*\*](#)

[\*\*Appendix\*\*](#)





### ***Introduction***

**I**t was an honor to be asked to write the *Gun Digest Book of SIG-Sauer* handguns with which I've had a long and most agreeable acquaintance. My work, as a firearms and deadly force instructor and as a writer/tester for gun magazines, has brought me into contact with more of them than I can count. It brings me into contact with lots of other fine guns, too, and that's been useful in putting the SIG pistols in context.

When it was announced at an executive meeting at SIGARMS that I'd be writing this book, one fellow blurted, "They can't let *him* write it! He's a *Glock* guy!"

After I stopped laughing, I realized he was partly right. I *am* a Glock guy. I'm also a Colt and Smith and Ruger guy, and a Beretta, Browning, and HK guy ... and yes, a SIG guy too. Damn it, I'm a *gun* guy.

And that's the angle from which this book comes. I was hired by Krause Publications, not SIGARMS. I'm not here to sell the guns. I'm here to tell you what we've learned about them. I've shot SIGs in matches, carried them on and off duty, taught classes with them, and kept them for home defense. But far more has been learned from the collective experience of law enforcement and military, and a vast nation of law-abiding armed citizens.

Sure, I've carried the SIG-Sauer from Alaska to Miami, but it's a lot more important to know that SEAL Teams and SAS troopers have used them from Arctic cold to desert sands, and found them not wanting. One of

the most popular law enforcement sidearms of modern times – probably the second most popular in the U.S. right now, outsold only by the Glock – the SIG has proven itself accurate, ergonomic, and above all, reliable and safe.

## Safety

Colt's classic 1911 pistol did not become drop-safe until the Series 80 firing pin safety, nor Browning's High Power until the introduction of the Mark III series in the late 1980s. Smith & Wesson's double-action autos did not get passive firing pin safeties to prevent inertia discharge until their second generation, and the Glock did not become 100 percent safe against impact discharge until 1990. The SIG-Sauers were drop-safe from the beginning. Some pistols require the trigger to be pulled on an empty chamber to begin the disassembly process, which has led to the occasional negligent discharge with a missile in the launch tube, but SIG-Sauer disassembly requires that the slide be locked open before takedown can even begin.

For many in law enforcement and the military, the long, heavy pull of a double-action trigger to fire the first shot is seen as a bulwark against accidental discharge. It is easy enough to shrug and say, "Just keep your finger out of the trigger guard until you're going to shoot," but that's too pat an answer. Take a walk through a video store and look at how many of the video and DVD jackets portray someone holding a gun...and notice how many depict the actor with his finger on the trigger. This sort of subliminal conditioning, along with a childhood of playing with toy guns, has left many people with a finger-on-the-trigger habit that takes a lot of time to train away. A firm resistance to an unintended pull is some degree of a safety net, and the SIG-Sauers have that.

I can think of three good-sized police departments who won't buy or authorize SIG-Sauers because these pistols do not have thumb safeties. Those three agencies require all personnel to carry their pistols on-safe. The SIG design parameter from the beginning was for these to be point-and-shoot pistols, simple to learn and simple to operate. It was felt that with a drop-safe gun, a manual safety was redundant, and not in keeping with the principle later heard at SIGARMS Academy, "Simple Is Good." Although a

few P226s with magazine disconnect safeties were made up per government requests – one from a U.S. agency, one from a foreign buyer – the SIG-Sauer has always been “an automatic that you shoot like a revolver.”

## Reliability

There will be comments from knowledgeable sources in this book about the final duel between SIG and Beretta for the U.S. military contract in the 1980s. It should not be taken as Beretta-bashing. After all, Beretta won. The final tests showed them neck and neck for reliability at virtually faultless levels. In 9mm service pistols, the comparison between the SIG P226 and the Beretta 92 is much like a comparison of the BMW and the Audi automobiles. In each case, both machines operate at the highest level of reliability and performance. Little things will dictate the choice. If you prefer to carry your pistol on-safe, you want a Beretta 92F. If you prefer to carry off-safe, you probably want a SIG P226, because it can't be found unexpectedly on-safe at the worst possible time. While Beretta offers the decock-only G-series, I don't find its operation nearly as ergonomic as the SIG's.



***Once you appreciate a SIG-Sauer, you won't be satisfied with just one. Firearms instructor Steve Denney with just the three SIGs he takes on the road while teaching; cases contain spare .40 S&W and .357 SIG barrels for further versatility.***

While I am one of those who likes the idea of an on-safe pistol, primarily from the handgun retention standpoint, the absence of that feature is not

necessarily a deal-breaker. The selection of any firearm is going to be a balance of perceived needs with the features of the given gun. The SIG has a lot going for it, and should not be discarded from consideration because it does not have one particular feature.

## Warts And All

This book will cover each of the SIG-Sauers, no holds barred. The good, the bad, and the ugly. No one has ever accused a SIG-Sauer of being a sleek or pretty gun. It's a tool, and a heavy-duty one at that. There is the occasional ammo incompatibility with this or that model, and these will be discussed with a view toward prevention and rectification.

SIG has been good about listening to constructive criticism and responding to it positively. One model would sometimes cycle too fast and fail to pick up the next round when loaded with +P+ ammo. That model is no longer imported. Another came with magazines that could jam during a slide-lock reload when wide-mouth hollow-points were used. Those magazines are no longer furnished with SIGARMS pistols.



***SIG-Sauer evolves the product as they find better ways to build guns. Left, an early P226 with separate breechface block, internal extractor, hollow pins. Right, current P226 with accessory rail, milled steel slide, solid pins, heavy-duty modern extractor.***



***Note that you can see daylight through the hollow slide pin of this older SIG. Current production uses stronger solid pins.***



***It's a stretch to call the SIG-Sauer "southpaw-unfriendly," and this book explains the left-handed manual of arms for this pistol.***

One model was known to occasionally suffer frame cracks when fired extensively with hot loads. It was beefed up and the problem was solved. The hollow slide pins on the P226 used to start to work their way out in the course of long shooting sessions – I remember pounding them back in place with a plastic Kubotan – but SIG replaced them with solid pins in the mid-1990s and cured the problem. SIG grips screws had an irritating habit of loosening up in the course of intensive firearms training...and damn it, they still do.

In their first incarnations, the P220 American and the P226 had magazine release springs sufficiently light as to be occasionally culpable in unintended dropping of magazines. For years, I advised students to replace them with aftermarket springs offered for the purpose by Trapper Gun in

Michigan, and did so with my own. SIG fixed that problem quietly in the mid-1990s.

Some criticisms levied against the SIG-Sauer are simply unfounded. A good example is the allegation that they are not southpaw-friendly. I think we can prove in this book that it's no trick at all for a left-handed shooter to manipulate the SIG-Sauer swiftly, positively, and effectively. Some make a big deal out of transitioning from a double-action first shot to single-action follow-ups. It's easy, and this book will show you how to do it. It's all a matter of knowing the correct techniques.

## **Have It Your Way**

Europeans as a group can sometimes be arrogant about what they choose to sell to Americans, vis-à-vis what those Americans ask them for. The people at SIG and Sauer have listened to the Yanks better than most. Those of us who've watched the SIG-Sauer pistols evolve over the years see this in a number of ways. Nowhere is it more graphic than in the development of no fewer than three significantly different trigger systems.

The standard SIG duty pistol is a traditional double-action (TDA), the first shot requiring a long, relatively heavy pull of the trigger. Subsequent shots offer a short, light trigger pull as the pistol cocks itself with each cycle. This is the overwhelming preference of military and civilian purchasers. It has also proven to be the most popular among police, though by a lesser margin.





***Three SIG P226s. Top, early production with internal extractor, folded chrome molybdenum slide. Center, current production, milled and blackened stainless slide, traditional configuration. Below, current production with integral accessory rail.***

ATF, FBI, DEA, IRS, Secret Service, Air Marshals, U.S. Marshals, and others have acquired SIGs by the thousands, and to the best of my knowledge all or virtually all have been TDA. Back around 1990, Supervisory Special Agent John Hall – then head of the FBI’s elite Firearms Training Unit, and the man most responsible for bringing semiautomatics to rank and file Bureau agents – explained to me his rationale for favoring the TDA firing system. Recognizing that the main reason for double-action in a service auto is to reduce the likelihood of accidental discharges, he said, “The great majority of accidental discharges occur with the first round. When it comes time to fire a second shot, the agent is in a gunfight, and I want that shot to be as easy as possible to put in the right place.” Frankly, I find it hard to refute that argument, and all the SIGs I personally choose to carry are in the TDA format.



***SIGs are designed to function – and to interface with the human hand –in the nastiest weather. The author has just come in from firing a 60-shot qualification course in freezing rain, but the target score is a perfect 300. Ergonomics of the P226 were critical to success; Blackhawk combat shooting gloves helped too.***

Next came DAO, the double-action-only trigger system. Where TDA is self-cocking during fire, the DAO is self-decocking. For decades before autoloaders replaced revolvers in the holsters of most American cops, police departments of New York City, Los Angeles, Miami, and others rendered their sixguns double-action-only. They had discovered that the hair trigger effect of a cocked gun could precipitate an accidental discharge, and that even the presence of single-action capability could bring a false accusation that an officer had cocked a gun and set the stage for a negligent shooting. The double-action-only concept was soon applied to autos.



*Thoughtful accessorizing enhances the pistol's abilities to perform its missions. This P226 "rail gun" mounts InSight flashlight, pre-ban 20-round magazine, SIGlite night sights.*



*"The insurmountable challenge of switching from double-action to single" is BS, says author, who shows you the proper techniques in this book. This is the result of two strings from a SIG .45, draw and fire twice (one DA, one SA) at 3 yards in three seconds.*



*When properly sized to the hand, the SIG is an excellent choice for males and females alike.*

The DAO SIG was pretty much the standard gun without a single-action mechanism. The stroke was full length and the same weight as the first shot on a TDA gun. Many officers found it tiresome, and few civilians wanted anything to do with it. Beretta's DAO, their D-series, had a lighter trigger pull thanks to the elimination of a single-action sear in its mechanism, and Smith & Wesson designed a new action entirely for this market with a shorter, lighter double-action stroke.

Several departments chose the SIG version. One example was the Ohio State Patrol, which adopted the P226DAO in caliber .40 S&W. The nation's two largest municipal police departments also went DAO. On both agencies, officers purchase their own guns off an approved list, and in both cases the SIG made the list. NYPD authorizes three DAO 9mms, and the P226DAO immediately became the "prestige gun" on that force. SIG has even produced what might be called an "NYPD Special," a P226DAO produced to the exacting demands of the end users in the Big Apple. Chicago PD authorizes 9mm or .45, and both the P226DAO and the P220DAO are very well represented there.



***Petite Nancy Crenshaw has just easily qualified at double speed. Her pistol? A SIG-Sauer P239 "subcompact."***

The third variation is the DAK, which stands for “double-action, Kellerman.” Explains Joe Kiesel, Technical Director at SIGARMS, “Harold Kellerman is in charge of engineering on all the Classic pistols at Sauer, and he was the one who supervised development of the new design. As the slide comes forward, the hammer comes to rest in a slightly pre-cocked position. The trigger pull is a very comfortable 6.6 to 7 pounds. If the shooter should fail to return the trigger all the way forward under extreme stress, he will still be able to fire, although the pull will now be about 8.5 pounds. In dry fire, or if he has a bad primer, the hammer will go all the way forward. The shooter will have a second-strike capability as in our TDA and DAO guns, but the pull will be heavier, again about 8.5 pounds.”



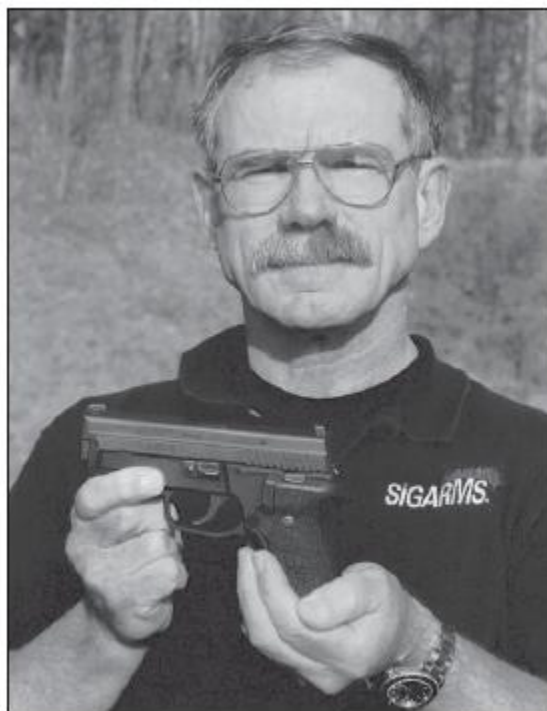
***The DAK version of the SIG fires the same ammo, fits the same holster as a TDA or DAO variation of the same model.***



***DAK is a new type of “self-decocking” mechanism and cannot be retrofitted into earlier SIGs.***

This has proven to be a much more “shooter-friendly” trigger than SIG’s traditional DAO, and I predict that before long it will replace the latter. The new trigger cannot be fitted into older guns, and we’re already seeing departments trading up to it. The New Hampshire Department of Fish & Game many years ago replaced their .357 Combat Magnum revolvers with

SIG P229 DAO .40s, and reportedly will be replacing them with P229s in the DAK configuration and chambered for .357 SIG. Numerous other departments are looking at them. Says Kiesel, “The Rhode Island State Police have just accepted delivery of their first shipment of P226 .357 SIGs, with the ‘rail gun’ (flashlight mounting) frame and DAK triggers.”



*Dana Owen with a prototype P229 DAK. The new gun is drawing enthusiastic interest from law enforcement.*



*The author tested this DAK prototype P229 .40 when it was so new that a P228 left grip panel had to be fitted to allow for its new mechanism.*





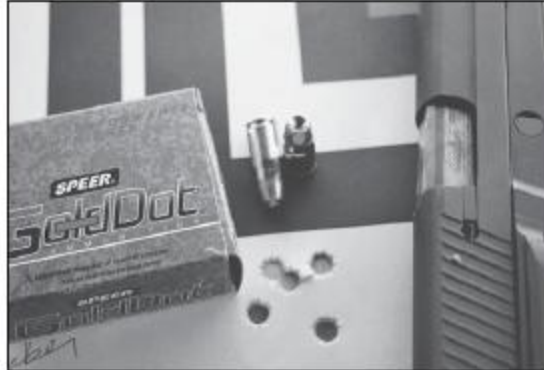
***This is the P229 DAK. Note the rounded hammer spur and absence of decocking lever behind trigger guard.***

The DAO is visibly distinguishable from the TDA only in that it has an empty space on the frame where the traditional gun would have a decocking lever. The DAK gun also comes *sans* decock lever, and in addition can be identified by a smaller, more rounded hammer configuration. When the hammer is all the way forward, as in dry fire, it disappears within the silhouette of the pistol.

Noted gun expert Walt Rauch, not usually a fan of conventional DAO semiautomatics, has had good things to say about the DAK. So, I expect, will Chuck Karwan, the gun-wise author of the third edition of the “*Gun Digest Book of Combat Handgunnery*”; Chuck hated the conventional SIG DAO trigger mechanism. Tactical firearms expert John Farnam absolutely raves about the DAK, and considers it a most valuable option. On all SIG-Sauers, no matter what the trigger mechanism, the takedown lever and slide release lever are all in the same place, except for the .380s, which do not have slide lock levers.

The SIG remains extremely popular with the police establishment. I’ve worked on the range with SIG-carrying cops from Australia, Belgium, Canada (where RCMP SWAT was the first to get them), Denmark, Germany, Great Britain, and of course Switzerland, as well as the USA. When one department adopts these guns and has tremendous success with them, you see the brand spread in the region. Around the Dallas area, you see more SIGs on cops’ hips than anything else. The SIG-Sauer is the predominant sidearm I see cops wearing when in Virginia. Indeed, whole

regions are dominated by SIGs. Four of the six New England states issue them to their state police. Rhode Island, as noted, has adopted the P226 .357; Vermont and Connecticut issue the P229 .40; and troopers in Massachusetts wear the .40 S&W caliber P226. The other two states carry .45s of different brands – the S&W 4566 in New Hampshire, the HK USP in Maine – but at least one of those states is strongly examining the SIG P220 .45 for adoption at this writing.



***SIG-Sauers deliver two ingredients of Jeff Cooper's defensive handgun recipe: Accuracy...***



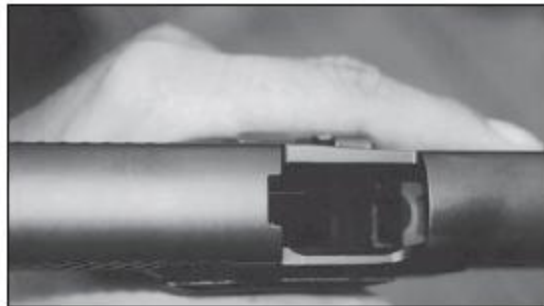
***... and Power. Speed is up to you.***



*The first-generation SIG P226 was, for some time, the nation's most popular police service pistol.*



*Continuing SIG-Sauer evolution. The breechblock is fitted into the stamped slide of this early P226...*



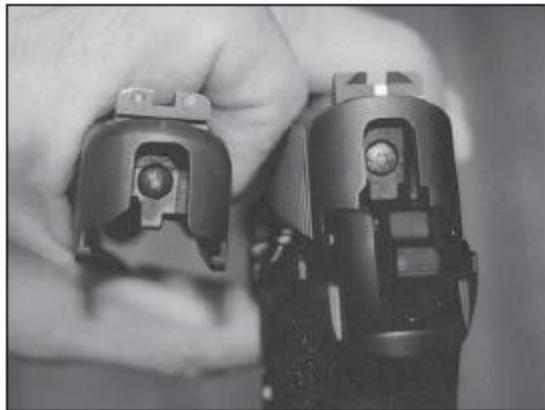
*... and milled from a solid block of stainless steel which was then blackened in this later version of same pistol.*



*SIG-Sauers have commonality of operating controls. Behind the trigger guard: magazine release. Above the trigger guard: takedown lever. At top of left grip panel, slide lock lever (not present on P230 and P232 models). Above and behind trigger: decocking lever (TDA models only).*

## A Very Brief History

This particular book was never conceptualized as a history of SIG, the SIG-Sauer collaboration, or SIGARMS. It's a user's guide, not a collector's reference. Schweizerische Industrie Gesellschaft (meaning, literally, "Swiss Industrial Company") of Neuhausen am Rheinfall, Switzerland built a long and honorable history as one of the world's most respected arms makers. Their first, classic pistol, in production for more than half a century, is the beautifully crafted and famously accurate P210. Though the SIGs have a Teutonic aura today due to the Sauer influence, there's also a Gallic thread in its history. A key element of the P210 is a slide that runs inside rather than outside the frame rails, and SIG licensed the patent for this, originally granted to Charles Gabriel Petter of France's Societe Alsacienne de Construction Mechaniques for the 7.65 mm French service pistol of 1935. The P210 is often called the "SIG-Neuhausen" by American shooters. (Yanks tend to pronounce it "New-howzen," but those who've been there say "Noy-hawzen.") SIG began arms making in 1860, producing muzzle-loaders, and around 1865 perfected a breech-loading military rifle. It was SIG that manufactured the bolt-action Vetterli rifle, which changed the face of military small arms in 1869; before WWI, SIG was building the Mondragon automatic rifle for international military contracts. The P210, which was born in 1947, was actually SIG's first handgun.



*Left, heavy-duty sheet metal stamping was the method of production for this early P226 slide; the slide on the new production pistol at right is machined from a solid block of steel.*



*These were the first P226 grips. Checkered plastic was well liked by shooters and considered good looking. However...*



*... SIGARMS felt that these stippled grips gave better grasping security, and they've been standard on the Classic models ever since...*



***... and these extremely ergonomic, non-slip, and adjustable stocks are a keynote feature of the ultra-modern sig pro line.***

J. P. Sauer & Sohn (not “Sauer & Son,” as commonly misquoted in the U.S. gun press) is located in Eckenfoerde in what at the time of their link-up with SIG was known as West Germany. They had produced modern, high-quality pistols before WWII. Sauer stood ready in the early 1970s when SIG approached them with a design for a highly reliable, modern service pistol which could be cheaply mass-produced but whose reliance on sheet metal stampings would be antithetical to the “Swiss watch of the pistol world” image that had been so carefully cultivated for the P210. The SIG-Sauer collaboration was born.

SIG absorbed the famous precision gun manufacturer Hammerli in 1971, and annexed J. P. Sauer in 1974. The SIG-Sauer concept was now locked in place.

In turn, SIG-Sauer begat SIGARMS as an American branch for sales and, ultimately, manufacturing. Much assembly is now done at the SIGARMS plant in Exeter, New Hampshire, and slides and frames for the P226 and P229 pistols are now manufactured there. (That had been true of the P239 as well, and may be again, but at this writing SIGARMS tells me that they are so overwhelmed with production demand for the 226 and 229 that the P239 components are currently being produced by Sauer.) Hammerli, famous for the accuracy of their precision target pistols, produces the barrels. This is doubtless one reason why the SIG-Sauer guns are so



accurate. By the 21st Century, the Mauser trademark, the exciting Blaser rifle, and assorted shotguns had also come into the SIG family.

As the years went on, the European Community concept encroached more and more around and even in what some consider the last truly free country on the Continent, Switzerland. There were those among the decision makers at SIG who felt that the future did not bode well for either the political correctness or the profitability of the gun industry, which was only a part of SIG's business. Enter Michael Lueke (pronounced Loo-Kay) and Thomas Ortmeier, German entrepreneurs who had become wealthy in the textile business, establishing the flourishing European firm TWE Technische Weberei GmbH & Co. Rifle enthusiasts and hunters, they at first wanted to purchase the rights to the ingenious Blaser hunting rifle. They ended up with a package deal, purchasing SIGARMS, Blaser, Hammerli, Mauser, Sauer, and the SIG assault rifle line. Those assault rifles are, in my opinion, quite possibly the finest in the world. It is Lueke and Ortmeier who are steering the SIG-Sauer pistols through their second quarter-century of triumphant performance.

## **From The Author's Perspective**

If we're going to show the subject warts and all, we should do the same with the author. I've been shooting handguns for about 45 years at this writing, and SIG-Sauers, since they came out in the U.S. I've carried the P226 9mm and P220 .45 in uniform, and those and others as a plainclothes officer and off-duty armed citizen. I've taught the use of the SIG on four continents (including the nation of Switzerland). The very first Lethal Force Institute class I taught included one, a Browning BDA .45 in the hands of a capable student of the gun named Shelley Ivey, and the SIG has been a constant presence among the student body ever since.

I've shot matches with them, legally carried them concealed in the four corners of the United States and in between, and monitored their large-scale use in more police departments than I can remember. I've taught shooting classes, and taken them, with the SIG-Sauer. I've come to respect these pistols. The first fully automatic firearm my younger daughter ever fired was a *Sturmgewehr 90*, the splendid Swiss assault rifle produced by SIG,

when she accompanied me to Switzerland at the age of 11 while I was teaching there for the International Association of Law Enforcement Firearms Instructors. When I was gone on long trips, the pistol my gun-savvy wife of 30 years chose to keep at her bedside was my SIG P226 DAO with an extended magazine loaded with 20 rounds of 9mm +P+. You could say that I have a lot of positive memories of SIG-Sauers.

This book focuses on the development, selection, and safe and effective use of the SIG-Sauer pistols. There will be only brief attention paid to the other SIG handguns: the legendary SIG-Neuhausen P210, the sweet little Hammerli Trailside .22 which is so particularly well suited to smaller sport shooters, and the latest, the well-conceived and executed SIGARMS GSR 1911. The Mauser M2, which has been marketed by SIG, is left out entirely. Despite its excellent accuracy potential, its poor human engineering, second-rate workmanship, lack of reliability, and minimal projected service life don't make it fit to appear in the pages of book concerning SIGARMS. I don't have any say what goes into the SIGARMS catalog, but I do have a say on what goes into this book, which is why we'll focus on the proven and enduring excellence of the true SIG-Sauer pistols.

Massad Ayoob  
Concord, NH, U.S.A.  
November, 2003



***Ayoob testfiring SIG-Sauers.***

## Chapter 1



### *The SIG P220*



### **The SIG P220**

**A** writer owes his readers a disclosure as to his biases toward this and his prejudices against that. Let me open this chapter by confessing that the P220 is my very favorite SIG A pistol, and indeed, one of my all-time favorite handguns. Extraordinarily

accurate, very reliable, and easy to handle and shoot, one of the P220's cardinal attributes is the cartridge for which it is chambered: the .45 ACP.

The gun was introduced in 1976, the first of the SIG-Sauer line. Essentially designed by Schwtzerische Industriale Gesselcraft and manufactured by Sauer, it was chambered initially for the 9mm Parabellum cartridge and then almost immediately for .45 ACP and .38 Super for the American market. The 9mm P220 was immediately adopted by the armed forces of Japan, and of Switzerland, where it remains the standard military sidearm of Europe's safest and most neutral country.

In 1977, Browning contracted with SIG-Sauer to produce the gun under their name as the BDA (Browning Double Action). It was introduced as such to the American market, where it received a mixed welcome. The gun experts loved it, instantly appreciating its smooth action, good trigger, reliability, and ingenious design. The purchasing public was less enthusiastic. They associated the Browning name with traditional, Old World guns crafted of fine blue steel and hand-rubbed walnut. Here was a modern pistol with flat gray finish and checkered plastic stocks, with an aluminum frame and a slide made of metal folded over a mandrel. It was as if Jeep had produced a fine four-wheel-drive vehicle under the aegis of Rolls-Royce: though the quality and function were there, the "look," the *cachet*, were not what the buyers associated with that particular brand image.



***The dust cover of P220 ST is grooved to accept accessories such as this InSights M3 flashlight.***

Before long, SIG had decided to import the guns into the United States on their own and under their own name, establishing SIGARMS in Virginia. (Much later, SIGARMS would move to Exeter, New Hampshire.) It was at this point that SIG sales apparently took off. If the public would buy a machine that was rugged and precision-made, but not fancy, from Jeep but not from Rolls-Royce, then the same public would buy a rugged, precision-made but not fancy P220 that was marked SIG-Sauer instead of Browning.

***Below is the author's Langdon Custom P220 ST. Stocks are by Nill.***



The Huntington Beach, California Police Department adopted the BDA in .45 ACP and had great luck with it. Their experience was widely publicized in both gun magazines and law enforcement professional journals. In the late 1970s, only a minority of American police carried semiautomatic pistols. Many gun-wise cops wanted auto pistols and didn't trust the 9mm ammo of the day; they wanted .45s. Until the P220, the only gun that fit the bill was the Colt 1911 type pistol. Some forward-thinking departments adopted the Colt – LAPD SWAT, several small departments in California, a couple of county sheriff's departments in Arizona – and many more made the Colt .45 optional. However, the mainstream of American police decision makers were leery about authorizing their personnel to carry a pistol that was perpetually cocked, and some worried that having to manipulate a safety catch would get in the way of a quick response when the officer needed it. The Browning BDA was obviously the answer, and changing its name to SIG P220 didn't change that answer. When the BDA as such was discontinued, Huntington Beach recognized that the P220 was exactly the same gun, right down to complete parts interchangeability; they bought P220s and used them interchangeably with the BDA pistols already in hand.

***Virtually straight-line feed is a key to the P220's famous reliability, especially with hollow-point ammunition.***



Police interest in autos was soaring. One sore point was that Americans habituated to American-style guns wanted a magazine release that worked quickly with a push-button behind the trigger guard. The BDA and the first SIG-Sauers had the European style magazine release, a spring-loaded securing clip at the heel of the butt. Police firearms instructors tended to be the department gun buffs, familiar with the 1911 and similar pistols from their time in other provinces of the world of the gun, and they clamored to SIG-Sauer for a pistol that ejected its magazines in the fashion to which they were accustomed. After all, speed of reloading was seen as one of the cardinal advantages of a semiautomatic pistol over a revolver; it was natural for the cops to want the fastest magazine release and therefore the fastest emergency reload possible.

SIG-Sauer listened and responded. In the early 1980s, they redesigned the P220 with an oval, grooved button behind the trigger guard to dump the magazine. While they were at it, they changed the shape of the grips, bringing the lower rear of the grip frame backward into an arch that widened toward the bottom. It filled the hand more substantially than the thinner and flatter-backed grip shape of the original P220. The change was analogous to Colt's switch in the 1920s, at the request of the U.S. Army Ordnance Board, from the flat-backed mainspring housing of the original 1911 pistol to the arched housing of the 1911A1.

It was what the cops wanted, and SIG P220 sales skyrocketed. The .38 Super had never been popular in America except for a brief period between its introduction in the late 1920s and when it was eclipsed by Smith &

Wesson and Winchester's joint introduction of the .357 Magnum revolver and cartridge. Only a few hundred .38 Super BDAs had been sold, and the caliber remained similarly moribund in the P220 configuration. While all P220 sales to the world's military had been in the 9X19 NATO chambering, I'm not aware of a single American police department that adopted either the BDA or the P220 in 9mm or .38 Super (though Secret Service would look very closely at the latter). No, it was the .45 that American cops wanted.

With the changed grip shape and side-button release, the new gun was designated the P220 American. Accordingly, the original would become known as the P220 European or P220-E. Its sales in the U.S. would wither and die, with the American style roaring forward in sales to police and civilians alike; the 1911's influence was even stronger in the latter sector of the U.S. handgun market.

Countless police departments, including the state troopers of Texas (who used it exclusively) and of Arizona, adopted the P220. The latter gave their highway patrolmen the choice of the eight-shot .45 P220 or the 16-shot 9mm P226. The overwhelming majority chose the P220 .45.



***The accessory rail of the P220 ST is a great addition.***





***This standard P220 has earned the author's smug smile. The one-hole group in the neck of target was made by 12 200-grain bullets fired in less than 20 seconds from 7 yards, including a reload. The tight cluster in target's chest was from one-shot draws averaging around a second at 4 yards. This is proof of the P220's shootability.***

In 1988, the FBI for the first time authorized rank and file agents to carry semiautomatic pistols. At first, only two guns were authorized, both in 9mm: the SIG and the Smith & Wesson. Shortly thereafter, the forward-thinking head of the Firearms Training Unit at FBI's Academy in Quantico, John Hall, convinced the Director to also approve the .45 ACP in the same two already-approved brands of pistol. FBI agents rushed to purchase their own SIG P220s, which were both more compact than the all-steel Smith & Wesson Model 645 that had been introduced in 1983, and much lighter. The P220 .45 was the choice of Special Agent Edmundo Mireles, who had emerged as the hero of the infamous shootout in Miami, which had led to the Bureau's approval of semiautomatics. Mireles had ended that gunfight with .38 Special bullets delivered to the head/neck area of the two cop-killers involved, and was clicking his revolver's hammer on six spent cartridges at the end of the drawn-out death duel.



***IDPA Stock Service Pistol Master Steve Sager tries his hand with a P220. The spent casing visible above his head shows immediacy of the shot, but the muzzle is still on target.***

## **P220 Attributes**

The P220 always fit most hands well. It always had good sights compared to most of its competition. And, of course, there was the reliability factor. The gun was and is extremely reliable.



***Whether steel- or alloy-framed, P220s are accurate with a variety of ammunition. +P should be used sparingly in aluminum-framed guns.***



***This LFI student has topped his class more than once with his ergonomic SIG P220 American. He is about to fire all center hits strong-hand-only...***

But the gun had other advantages, too. High among these was the double-action first shot mechanism. Police chiefs had been leery about carrying cocked and locked guns. The long, heavy double-action pull required to initially unleash the firepower of the P220 was much like that of the revolvers that were so much a part of their institutional history. Cops in general and police chiefs in particular were and still are much more comfortable with a double-action like the 220.



***...and does the same weak-hand-only, with good recoil control. Note spent casing passing the target to the right of the gun.***

Most 1911 pistols of the period were not “throated” by their manufacturers to feed wide-mouth hollow-point bullets, the choice of most police and gun-wise private citizens. Engineered with a nearly straight-line feed, the P220 was reliable with almost every hollow-point bullet.



***The P220, even with an aluminum frame and powerful .45 ammo, is comfortable for a week of intensive firearms training.***

There was also the accuracy factor. The SIG-Sauer pistols are famous for accuracy across the board, but the P220 may be the most accurate of them all. I have twice put five rounds from a P220 into one inch at 25 yards. Both times, the ammunition was Federal 185-grain JHP, which the manufacturer used to mark on the box as “Match Hollow Point.” It was certainly truth in advertising. One of those guns was a well-worn P220 European, the other, a brand new P220 American.

Almost every credentialed tester has noted the P220’s extraordinary accuracy. In his book *The , defensive firearms 100 Greatest Combat Pistols* expert Timothy J. Mullin had this to say about the P220. “All SIG pistols and products are fine weapons, but this one is particularly impressive. My groups were so remarkable that I tested again at 25 and at 50 yards – and the results were just as superb. I placed five shots into a little more than 2 inches, and I pulled one of those shots. Four shots went into roughly 1-1/4 inches.” (1) A fan of SIG’s compact single-stack 9mm, Mullin added,

“Although the P220 is not as good as a P225, I would rate it the top weapon that I tested in .45 ACP.” (Mullin’s emphasis.) (2)

My friend Chuck Taylor is one of the leading authorities on combat handguns and the author of a great many articles and multiple books on the topic. When he wrote the fourth edition of *The Gun Digest Book of Combat Handgunnery* he had the following to say about the P220 .45.

“First appearing almost two decades ago as the Browning BDA, the P220 in its current American version is regarded by many as being *the* state-of-the-art .45 auto. Indeed, its popularity is exceeded only by that of the Colt M1911 Government Model, whose king-of-the-hill status the P220 is now seriously challenging, especially in law enforcement circles.” Chuck continued, “The P220 is a simple design, perhaps as simple as a handgun can be and still work. Its human engineering is excellent because, like its baby 9mm brothers, the P225 and P226, its controls are placed where they can be readily operated, something exceptional for a DA auto. Furthermore, its mechanical performance leaves nothing to be desired. It is probably the best DA self-loader around...In summary, the P220 is an excellent example of how good a DA auto can be. As such, it is well worth its not-inconsequential price and clearly a handgun upon which one could with confidence bet his life.” (3)



***Current magazines make the P220 reliable with eight in the stack and a ninth in the launch tube.***

Many double-action semiautomatics had a DA trigger pull that was heavy, rough, or downright lousy. The SIG’s double action pull was excellent, probably “best of breed.” It was the standard by which the competition was judged. Once the first shot had been fired, it went to single-action, where the trigger press was a clean, easy 4 to 6 pounds or so.

The distance the trigger had to move forward to re-set the sear was just enough to give a buffer against unintentional discharges under stress, but not so great that it appreciably slowed down the shooter's rate of fire.

With a 4.41-inch barrel, the SIG was a little longer in that dimension than the 4.25-inch Colt Commander, but more than half an inch shorter than the 5-inch Government Model. The Commander, originally introduced in lightweight format in 1949, weighed 26.5 ounces unloaded and held the same number of .45, .38 Super, or 9mm rounds as the P220. Later offered as the steel-framed Combat Commander, the Colt put on an additional 10 ounces in that format. The lightweight Commander was dubbed by one of its greatest advocates, Col. Jeff Cooper, as "a gun designed to be carried much and shot seldom." Most who had fired it considered it much more unpleasant to shoot than its big brother, the full-sized, all-steel Government Model.



***This is the double-action-only (DAO) version of the P220 .45, carried daily by a Chicago cop. Note the absence of decocking lever behind the trigger guard. Grips are by Hogue.***

Thus it was that the cops and the shooting public were delighted to discover that the SIG P220, which like the lightweight Commander had an aluminum frame, wasn't anywhere near as difficult to shoot as the alloy-framed Colt. A major reason for the perception of the Commander's vicious recoil was that, until the 1990s, its manufacturer furnished it with a short, stubby-tanged grip safety that bit painfully into the web of the hand whenever the gun was fired.

By contrast, the P220 was much rounder and more friendly to the hand. Nothing bit the shooter. In the P220, the low-pressure .45 cartridge simply



drives the slide back with a gentle bump. Even though the slide of a 1911 pistol sits lower to the hand and should jump less since it has more leverage, anything that causes pain to the hand will magnify the shooter's sense of recoil, and increase his likelihood of flinching and blowing each shot.

The P220 weighs a tad less than a lightweight Commander, 25.7 ounces unloaded. Yet most officers found it at least as pleasant to shoot as the full size 1911A1 in the all-steel configuration, which weighed some 39.5 ounces. Only when a custom gunsmith (or, beginning in the 1990s, the manufacturers) put a beavertail grip safety on the lightweight 1911 did it become as comfortable to shoot as a P220, and allow the shooter to take advantage of the reduced muzzle jump potential afforded by its lower bore axis. However, none of this changes the other SIG attributes that made the P220 a favorite.



***The next time someone tells you that you can't control a SIG .45 because it has a higher bore axis than a 1911, remember this photo. The spent casing of full-power .45 load is sailing past her cap brim, yet slender Patricia Sager has kept the P220 ST on target.***



***A P220 loaded with nine rounds of .45 Hydra-Shok is a reassuring companion for police officers and law-abiding armed citizens alike.***

A lightweight service pistol is especially important in law enforcement. The duty belt carries a great deal of equipment. The author has seen duty belts weighing in the 15- to 20-pound range once festooned with multiple handcuffs, a full-sized baton, heavy flashlight, portable radio, and ammunition. The pistol is a significant part of the load, and any reduction in weight is appreciated. The weight of the duty belt is one reason why back problems in general and lower back problems in particular seem to be an occupational hazard of the street cop.

The pistol in its uniform holster rides near the edge of the hip, and on some individuals with some uniform designs, can directly contact the ileac crest of the hip. The potential for fatigue and discomfort is obvious. Reducing the weight of the duty .45 from 39.5 ounces to 25.7 (the same round-count of the same ammunition adds the same weight to either) results in a 13.8-ounce weight saving – almost a pound – at a critical point.



Now, let's look at plainclothes wear, whether in a detective assignment or off duty. The dress type belt, even a dress gunbelt, does not support the weight of the holstered gun as efficiently as the big, 2-1/4-inch-wide Sam Browne style uniform belt. A heavy gun becomes all the more noticeable. For generations, officers carried little 2-inch .38 caliber revolvers as off-duty guns, simply for their light weight and convenience. However, they paid the price of a caliber that offered minimum acceptable power, especially when the ammunition was fired from a short barrel. They paid the price of a reduced in-gun cartridge capacity, only five to six rounds. They paid the price of a gun that kicked hard despite that minimum acceptable power level, and a gun that was difficult to shoot fast and straight, particularly at small targets or at longer range.

Now, the P220 .45 gives the plainclothes officer a much more attractive option. While not so small overall as a snubby .38, it is very flat. It fires the much more powerful .45 ACP cartridge, but despite its greater power it kicks less and is more pleasant to shoot than most snubbies. It is about the same weight as the six-shot Smith & Wesson Model 10 or Model 64 Military & Police revolver with a 2-inch barrel. And, of course, it is much faster to reload, and its flat magazines are much more discreet and comfortable to carry than speedloaders for a revolver when concealment is the order of the day.

With an inside-the-waistband holster and proper clothing, the P220 virtually disappears into concealment. With a well-designed scabbard riding on the outside of the belt, it is almost as easy to hide. The fact that a single pistol with which the officer is intensively trained could be used on or off duty, in uniform or in plainclothes, is another big factor in the P220's favor when police departments look at purchasing new sidearms.

The P220-E is a particular favorite of mine. Back in the 1980s I discovered that, just as the flat housing of the original 1911 pistol fits my hand better than the arched housing of the later A1, the slimmer, flatter-backed shape of the original SIG P220 grip frame seemed more comfortable in my hand than that of the later P220.

However, there is another reason I was partial to the P220-E. In the Northern New England area where I have spent my now almost 30 years as a police officer, it is not uncommon for the wind chill factor to bring the temperature to 30 degrees below zero or worse in deep winter. This requires

heavy gloves. I had found over the years that bulky gloves could sometimes cause a shooter to unintentionally activate a side-mounted magazine release button. This did not occur with a gun that had a butt-heel magazine release, like the P220-E or the BDA that preceded it. I special-ordered a P220-E .45 from SIG, and was told that it would probably be the last one brought into the country. (I'm told that the firm later changed its mind and brought in a few more in dribs and drabs, as the limited stateside demand warranted.)

This became my favorite winter gun for many years. On patrol when department regulations allowed it, and on my own time always, the P220-E was part of my cold-weather gear. Since the P220 American's magazine was the same as the European's but with four engagement holes cut in the sides (two on each side, to mate with the side button mag release, which could be easily converted for left hand use), the new magazines fit my old gun. The reverse was not true. This was because the European style mags did not have a cutout in which the side-button mechanism of the P220 American could engage. Much later, when SIG's current eight-round mags came out with bumper pads running front to back, it turned out that they would not be compatible with the European or BDA magazines. This was because the rear of the extended bottom of the magazine could not engage the butt heel release device.

That particular P220-E is now in the hands of a good friend who needs it more than I do, but I cherished that pistol and look forward to having it back one day. It was modified over the years by pistolsmith John Quintrall, a master of the SIG-Sauer who was guided by a very knowledgeable old hand, the late Jim Anderson. The action was butter smooth in double-action and super sweet in single. John fitted Trijicon night sights (there tends to be more dark time in the winter, and remember, this was my "winter gun"), and after I shot it so much the accuracy started to fade slightly, he fitted a Bar-Sto barrel. It turned out to be the one case in which I had a Bar-Sto installed in a pistol, and accuracy did not improve. There was nothing wrong with the Bar-Sto; it simply couldn't improve on the already superb SIG-Sauer barrel. A new SIG barrel, I expect, would have given me pretty much the same results.

The butt-heel release is a second or so slower for speed reloading than the American style. Certainly, there are situations in which a second can make all the difference; Americans are acutely conscious of that, and this is

why SIG makes the American style P220. However, I found that with heavy snowmobile gloves on, the cruder gross motor movements of pushing back the latch with the free hand thumb and ripping the spent magazine out were actually more easily accomplished than finding the magazine release button with a thumb encased in a heavy glove that blunted the sense of touch and limited the thumb's range of movement. In short, in heavy winter garb, I was able to reload the P220-E as fast, or very slightly faster, than the P220 American.

## The P220's "Other" Calibers

While we Americans have directed most of our attention to the .45 caliber P220 – after all, the .45 ACP has been called “the classic American cartridge” – the P220 has racked up an enviable reputation in its other calibers as well. On more than one occasion I've taught in Switzerland. There are some police departments there that issue the P220 in 9X19mm, though the higher capacity P226 seems to be far more common in Swiss law enforcement. More to the point, though, the P220 9mm has been the national standard Swiss military sidearm for many years.

Switzerland is a nation of shooters. It is well known that the Swiss militia constitutes the entire able-bodied male population of the nation (Swiss women may join voluntarily, though it is not required) and that all are issued what may be the finest assault rifle in the world, SIG's Stg.90.

The *Sturmgewehr 90* is a superb, state-of-the-art assault weapon. However, the Swiss public takes marksmanship as one of their national sports, and most of that marksmanship is done with military weapons of various ages. Virtually every Swiss village I passed through had a 300-meter rifle range, and the ranges stay in constant, heavy use. In rifle matches, the ancient Schmidt-Rubin 7.5 mm straight-pull bolt-action rifle is still used to compete against the ultra-modern SIG Stg. 90.

I say all this to lead up to a point. The Swiss have a lot of pistol matches, too. As you might expect they fare well in ISU (International Shooting Union) Olympic-style target sports, and also have a well-established contingent of practical shooters who belong to IPSC (the International Practical Shooting Confederation). However, a good deal of their handgun

competition also involves national standard military weapons. Over the course of the 20th Century, Swiss military-issue handguns have included such fabulously accurate weapons as the Luger pistol, the exquisite SIG-Neuhausen P210, and only since the latter quarter of that century the SIG P220 9mm.



***The P220 tends to give consistently good accuracy with most .45 ACP ammunition. These groups were fired from 25 yards.***

And there was one thing I couldn't help but notice. The 9mm P220 keeps up with the famously accurate P210! This, clearly, is testimony to the P220 9mm's match-grade accuracy, which is achieved without compromising total reliability, even with some very old pistols that have fired countless thousands of rounds over the decades.

The .38 Super P220 did not prove popular at all. In the United States, at least, it had always been a specialist's cartridge. Handgun enthusiasts appreciated its flat trajectory. Handgun hunters appreciated its inherent

power. Cops in the Depression years liked its deep penetration against criminals' "bullet-proof vests" and automobiles of the period. But no one liked its mediocre accuracy.

The reason was that the .38 Super was not a true "rimless" auto pistol cartridge, but instead featured a semi-rimmed case. From its introduction in the late 1920s until the coming of the SIG-Sauer engineers, Colt and every other manufacturer cut the chambers of their .38 Supers to headspace on the rim. The chamber in SIG-Sauer P220 in .38 Super was cut to headspace at the case mouth, which allowed more consistent and solid chambering. Thus did the Browning BDA/SIG P220 become the first truly accurate factory-produced .38 Super pistol. The same headspacing was developed by gun barrel genius Irv Stone, the founder of Bar-Sto, and when put in 1911 target pistols resulted in the .38 Super cartridge's renaissance in the shooting world, specifically in practical pistol competition.

It has been reported that the P220 has been produced in very small quantities in caliber .30 Luger. I cannot speak to its accuracy as I have never seen one, let alone tested one. I am not aware of any nation or agency that has adopted the P220 in that caliber. Thus, its accuracy remains an unknown quantity, at least to this author.

## Idiosyncrasies

In earlier models, there were some specimens in .45 caliber which did not feed one particular cartridge in one particular situation. The round was the old "flying ashtray," a short and very wide 200-grain hollow-point from CCI Speer, who called it at various times the Lawman load and the Inspector load. It was notorious for jamming 1911 .45 pistols. The SIG would normally feed it just fine, but with some of the seven-round magazines, if the pistol was reloaded from slide-lock, the short Speer 200-grain would take a little dip coming off the magazine's follower and strike low enough on the feed ramp to cause a six o'clock jam.

Most simply got by with another brand of ammo. My own solution was to load my personal P220 with the eight of the flying ashtrays, one in the pipe and seven in the mag, and then load the spare magazines with some other type of JHP round. My P220 *never* failed to feed this infamous gun-

jammer once it was loaded into the P220 and the first round was chambered.

Over the years, the problem has resolved itself with new designs. The current 200-grain CCI Speer .45 offering, the Gold Dot bullet, does not seem to have any problem feeding in late model SIGs. I think it's a combination of the improved fourth-generation P220 .45 magazine, and better feeding characteristics of the Gold Dot 200-grain bullet compared to the conventional jacketed hollow-point which preceded it.

Chuck Taylor is a contemporary and observed the same thing. He wrote in his edition of *The Gun Digest Book of Combat Handgunnery*, "My P220 shoots very well indeed, with three-shot Ransom Rest 25-meter groups averaging slightly over 2 inches. I've also had no functioning problems whatsoever with the gun, although in some of the earlier versions, some problems were reported with several styles of JHP bullet. SIG Sauer, to their credit, immediately relieved the front of the magazine body to allow better bullet clearance, which solved the problem nicely." (4)

## **P220 .45 Magazines**

About those four generations of P220 .45 magazines. They go like this:

First generation: Seven-round BDA/European style. Will only work in P220s with butt-heel magazine release.

Second generation: Seven-round P220 American style. Will work in American, European, and BDA model .45s.

Third generation: The so-called "DPS Magazine." A P220 American mag with the same flat-bottom floorplate as the first two generations, but modified in spring and follower to take an eighth round. These were created for the Texas Department of Public Safety when they adopted the P220 American .45, and reportedly, Texas DPS had great success with them. Personally, I have never trusted a magazine designed for seven rounds, which then had an eighth forced into it; we fool Mother Nature at our peril.

The eighth cartridge in a magazine originally designed for seven put the rounds so tightly in the stack inside the magazine that there was no flex in the spring. This meant that if the P220 was reloaded with the slide forward, either in administrative loading getting ready for duty or in a tactical reload

with a live round already in the chamber, the shooter really had to *slam* the magazine in to make certain that it locked in place. After experimenting with the DPS magazine, I went back to the earlier ones. Police had already cautiously waited for decades to switch from revolvers to autos because of fears of reliability. Their mantra had been, “Six for sure beats 14 maybe.” My reasoning as to P220 magazines was similar: “Seven for sure beats eight maybe.”

Fourth generation: Eight-round current production. These are unquestionably the finest .45 caliber magazines ever made for the P220 pistol. They are crafted of stainless steel, always a bonus when a gun and its spare magazines are carried in hostile environments, which can be rain and snow attacking guns holstered outside the clothing, or heat and humidity and salty, corrosive human sweat when the pistol is carried concealed. Moreover, the Gen Four SIG P220 .45 magazines are extended very slightly at the bottom, into a hollow floorplate. This does two good things. First, the buffer pad on the floorplate makes magazine insertion easier and more positive, especially under stress. Second, the added space inside the floorplate allows the eighth round to be stored there without too rigid a spring stack or undue pressure on the magazine springs. These are what I now carry in my P220 .45.

A word on aftermarket magazines. I normally trust only the magazines the gunmaker sells with its firearms. For the P220 .45, I trust Sauer-made SIG magazines and I trust Mec-Gar magazines. This may be seen as a redundancy, since Mec-Gar produces SIG’s magazines for them. The currently imported Novak’s P220 magazine seems to work well. ACT in Italy produces it. While marketed as an eight-round mag and having an extended floorplate, I’ve nonetheless found that some will comfortably hold all eight and some are better carried with seven rounds, at least when new.

Many shooters have found full P220 .45 mags hard to unload, at least for the topmost cartridge or two. Here’s the secret. Hold the loaded magazine in one hand and pinch the thumb and forefinger of the other hand beneath the nose of the cartridge on top, applying upward pressure. Now use the thumb of the magazine-holding hand to push the cartridge forward. It will come out much easier. Repeat if necessary for the next cartridge or two; after that, spring pressure will be relieved and the thumb alone will be able to slide the rest of the rounds out easily.

## Variations

Though many considered the P220 a compact handgun, many who owned them wanted one even smaller for deeper concealment. This wish was granted by SIG in the form of the excellent little P245, a pistol that differs sufficiently from the P220 that it is treated separately in this book.

Stainless steel P220s have also been produced. Basically the same gun as the original, but heavier, they differ only in handling qualities and, of course, in adding one more option of corrosion resistance to the many finishes which are discussed in the segments of this book devoted to accessories and customizing.

The first of these guns was the P220 Sport, introduced to the public in 1999. I was at a conference of the firearms press conducted by SIGARMS in conjunction with the NRA Show and Annual Meeting in Philadelphia in 1998, where we were given a chance to play with advance versions of this gun.

Fitted with a long muzzle weight-*cum*-compensator, and with an all-steel frame of stainless alloy, this handsome pistol sports a 5.5-inch barrel and weighs some 44 ounces. With the added weight and the comp, recoil and muzzle jump are greatly reduced. The exquisite accuracy of the earlier P220s was clearly present in this .45. It was introduced with grooves on the dust cover (front of frame) to accept additional weights and other accessories proprietary to SIGARMS.

I liked the gun, but found it a bit big for my tastes and needs. Like many, I just said, "Make us a regular P220 with this frame, and groove the dust cover to accept more common accessories, like the M-3 flashlight."

SIG listened. The 21st Century saw the P220 ST, exactly the gun described above. Though the first models had reliability problems (and, I thought, below-P220-standard accuracy), this was traced to the use of a stainless steel barrel. SIG solved the problem by installing their conventional chrome molybdenum steel barrel within the stainless slide.

Now, we had a truly meaningful option within the P220 line. There were those of us accustomed by years of wearing Colt Government .45s that weighed 39 or so ounces, and didn't mind the fact that this was the weight of the all-steel P220 ST. In return, we got the recoil reduction and added durability that came with all-steel construction. Before, SIG engineers had



been leery about recommending +P .45 ACP ammo for these guns. I saw very few aluminum P220 frames crack after continuous shooting with +P, which brings the ACP up to a power level comparable to a full-power 10mm Auto cartridge, which is infamously brutal to even full-size .45 caliber guns. With the ST variation, my sources at SIG tell me that they just don't see a problem.

### ***References***

1. Mullin, Timothy J., *The 100 Greatest Combat Pistols*, Boulder, CO: Paladin Press, 1994, P.315.
2. *Ibid.*, P. 316.
3. Taylor, Chuck, *The Gun Digest Book of Combat Handgunnery, Fourth Edition*, Iola, WI: Krause Publications, 1997, P. 224-225.
4. *Ibid.*, P.225.

## Chapter 2



### *The SIG P225*



**S**IG-Sauer's second pistol was the P225. The German government was looking for a compact law enforcement pistol in 9mm Parabellum, and high magazine capacity was not a priority. SIG's answer, the P225, became a modern classic overnight. It was widely adopted in German law enforcement, and struck a responsive chord in the U.S. market as well.

Mechanically, Wiley Clapp in *The Gun Digest Book of 9mm Handguns* aptly described the P225: "The 225 is a version of the 220 in which the length and height measurements have been reduced. A 225 will measure

about three-quarters of an inch less in length and about a half inch less in height. Aside from the more compact dimensions, the 225 differs in the contour of the grip and trigger guard. The grip has been altered in an altogether pleasing fashion. It is slightly slimmer, but more significantly, it is attractively rounded at the lower rear of the butt. The overall impression is quite different from the 220.” (1)

The P225 has been made only in one caliber; 9mm Parabellum. It contains eight rounds in its single-stack magazine and a ninth in its chamber. The magazines are slim, flat, and easy to conceal. So, of course, is the gun itself.

## **When Handling Characteristics Decide the Issue**

Numerous law enforcement agencies have adopted this gun in Europe, and many have authorized it in the United States. It is particularly suitable for officers with small hands. The shorter reach to the trigger is a boon for shooters with short fingers.

In a federal lawsuit entitled *Judy Cangealose v. Department of Justice, Janet Reno, and FBI*, I was hired on behalf of a female FBI agent trainee who was fired for failing to qualify with her issue service weapon at the FBI Academy in Quantico. At the time (and now, for that matter) Cangealose would have had the option of carrying a compact 9mm pistol such as the SIG P225 or the S&W Model 3913 while on duty. One element of the lawsuit was that she should have been allowed to use such a pistol at the Academy. Instead, the Bureau issued Cangealose – a slender, petite woman with very small hands – a relatively huge, heavy 10mm semiautomatic. She could not reach the trigger in a manner that gave her proper control of the pistol.

In preparation for the trial, I took Ms. Cangealose to the range with, among other guns, a SIG-Sauer P225. She fired a number of exercises from the required FBI qualification curriculum. The P225 fit her perfectly, and she passed with flying colors. I testified to this under oath in deposition. Knowing where it was going, FBI and the Department of Justice settled out of court for a significant amount of money just before the trial got underway.

The P225 was by no means limited to petite females in its appeal. A number of highly trained men find its ergonomics, even more than its compact size, make the P225 not only their favorite SIG, but sometimes, their personal carry gun.



***The P225 in an average size man's hand. One of the most ergonomic modern auto pistols ever made, it is particularly suitable to those with small hands and/or short fingers.***

Tim Mullin raved about the P225 in his book *The 100 Greatest Combat Pistols*. "The P225 is an excellent weapon," he wrote. "Because of the single-column magazine, the grip on the P225 is sufficiently shallow and narrow to allow you to get a good grip on a weapon (unlike the P226), and it has a good feel to it... All in all, I would rate this pistol very highly." (2)

Roy Huntington has been a well-known commentator on police firearms and the law enforcement training scene for many years. His 20-year career with the San Diego Police Department encompassed a number of assignments, including a stint on the Harbor Patrol, where he became the model for a character in a Joseph Wambaugh novel. Now retired from police work and serving as the editor of *American Handgunner* magazine, Roy worked on a department that limited pistol choice to 9mm and issued 147-grain subsonic ammunition, but gave the officers a number of weapons

choices within those parameters. The SIG-Sauer pistol is extremely popular among San Diego cops who buy their own guns. In fact, the P229 9mm is currently the standard-issue sidearm there and Roy purchased his own P225.

Well trained at Thunder Ranch and a number of other schools he attended on his own, Huntington was well aware that shot placement was more important than round count or caliber. He perceived himself as having short fingers, and didn't feel that the larger girth of a pistol frame housing a double-stack magazine gave him the exact grasp he wanted for maximum control of his shots at high speed. Modified slightly over the years by the best custom gunsmiths, Huntington's SIG-Sauer P225 was his choice of a duty weapon. He never felt handicapped in terms of firepower with nine rounds in the gun and a pair of spare magazines on his belt, and never regretted his choice of duty sidearm.

Lt. Dave Spaulding of the Montgomery County, Ohio Sheriff's Department is another lawman with a very long resume in firearms training. He has served with me for many years on the Firearms Committee of the American Society for Law Enforcement Training. Dave had broad discretion in choice of sidearm for most of his career. For many years, his choice of duty weapon was also the SIG P225. Like Roy, he had his pistol lightly customized and action-tuned for maximum performance over the years, a prerogative each man enjoyed because each had purchased his duty weapon out of his own pocket. Though he does not have particularly small hands, Dave also appreciates a pistol that lets you get a good bit of flesh and bone wrapped around the "handle," and gives you a reach to the trigger that affords you maximum leverage in high-speed shooting. It was this that made the P225 so appealing to Dave Spaulding.

Unlike Roy, however, Dave didn't finish his career with the P225. While Roy was happy with the performance of the Winchester OSM (Olin Super Match) subsonic 147-grain hollow-point issued by his department, Dave's agency had less satisfactory experiences with it. After an egregious stopping failure Dave, who was in a position to do something about it, got the department into hotter loads with lighter bullets and higher velocities. Eventually, he just decided to go with a .40 caliber service pistol. The first of the SIG-Sauer pistols to get the American style push-button magazine release located behind the trigger, the P225 is an ergonomic pistol that

seems to make a friend of everyone who shoots it. The accuracy is right up there with the SIG-Sauer tradition. In the *Gun Digest Book of 9mm Handguns* the P225 delivered 2.25-inch groups with Winchester Silvertip 115-grain JHP, 2.5-inch groups with Federal 9BP 115-grain JHP, and 2.75-inch groups with Federal full-metal-jacket ball ammo weighing 123 grains. This very consistent shooting was done at 25 yards. (3)

The book also illustrated that the 9mm cartridge is less sensitive than some others to velocity loss from shorter barrels. The barrel length of a P225 is 3.86 inches. Notes co-author Wiley Clapp, “An interesting thing happens when you compare the velocities that were obtained in the 225 with those of the 226. There is no statistically significant difference. But there is about three quarters of an inch difference in the barrel length. If you need the concealability of the shorter 225 , you are sacrificing nothing in the performance of typical ammunition. If you have to have the larger capacity of the 226 with its 15 shots, so be it. Still, you could take the bottom half of a 226 (fifteen-shot magazine) and graft on the top half of a 225 (short barrel and slide) – you’d get the best of both – call it a 225-1/2 .” (4)

Some perceived the 9mm Parabellum chambering itself to be a shortcoming of this gun. Noted Clapp, “...the gun would sell like hotcakes if it were to be made in .45 ACP or 10 mm auto, at least in the United States.” (5) There is reason to believe that the folks at SIG, Sauer, and SIGARMS all had the same assessment. When the next compact SIG came out, the P239, it was chambered for .40 Smith & Wesson and .357 SIG as well as 9mm Parabellum.

The P239 would cast a dark cloud over the P225. It was seen as a more modern gun, and optionally, a more powerful one, and therefore more desirable. The most recent *Gun Digest* does not list the P225. Imports to the United States dried up some time ago.

The persistent rumor that SIG-Sauer has discontinued the P225 is incorrect. Says SIGARMS Technical Director Joe Kiesel, “The P225 is still produced, and will be with us for some time to come. A variant of the P225 is the P6, the German Army pistol, and for that contract alone it can be expected to remain in production. It hasn’t been imported to the U.S. for years, for the simple reason that since the introduction of the P239, there has been virtually no demand for the P225.”

The P239 is a superb pistol. There is much that it can do that the P225 cannot, such as fire more powerful ammunition. Still, there is a combination of classic lines and exquisite feel in the hand that will make the P225 much missed in some U.S. shooting circles. If you can find a good used one, you'll probably not be sorry if you buy it.

## **Idiosyncrasies**

Over the years, I received complaints occasionally from owners of the P225 that when they loaded it with hot, high-velocity ammunition such as the Cor-Bon 115-grain JHP at 1,350 feet per second nominal velocity, the pistol would occasionally fail to pick up a round. What apparently was happening was that the extremely powerful round was driving the short, light slide rearward so fast, allowing it to snap back forward with commensurately greater momentum, that the slide would close over the top of the magazine before the topmost cartridge could be picked up. The result would be a “click” instead of a “bang” at the next pull of the trigger, because the hammer would fall on an empty chamber.

I never personally experienced this with a P225, and I never heard of it happening with a P228, which also has a short slide. Apparently, the strong spring in the double-stack magazine of the P228 was always able to push the next round up into place so fast that the fastest slide couldn't beat it. The P225 magazine, being a single-stack that required less spring tension, was the only gun I heard of this happening with. The subsequent P239 does not seem to have ever had this problem.

When Spaulding was carrying a P225 on Montgomery County, the agency for some time had both Cor-Bon and Winchester 115-grain +P+ ammunition for the 9mm guns, and he had no problem running plenty of it through his. This incompatibility is apparently a rare one. If you carry hot loads in your P225, be certain to run a lot of them through to ensure proper functioning. If the problem does show up, the best bet would probably be to throttle back to a standard pressure 115-grain hollow-point Winchester Silvertip or Federal 9BP.

## ***References***

1. Grennell, Dean A., and Clapp, Wiley, "The Gun Digest Book of 9mm Handguns," Northbrook, IL: DBI Books, 1986, P.147.
2. Mullin, Timothy J., "The 100 Greatest Combat Pistols," Boulder, CO: Paladin Press, 1994, P.187.
3. Grennell and Clapp, *op.cit.* P.207.
4. *Ibid.*
5. (5) *Ibid.*



## Chapter 3



### *The SIG P226*



**Developed for the military, the P226 became a premier police service pistol.**

**I**ntroduced in 1983, the P226 evolved from the P220 as a large-capacity 9mm. It was SIG's entry in the U.S. trials for what would become the nation's new military service pistol. When those grueling and I comprehensive tests were done, only two handguns stood at the top of the heap: The SIG P226 and the Beretta 92F.

Beretta won the contract. Some said that they had underbid SIG, either on the pistols themselves or on the combined package including magazines, parts, and accessories. Others hinted darkly that a deal had been brokered. Rumor had it that the U.S. wanted to place cruise missiles in Italy, and that Italy in return wanted a fat contract for their military arms industry, which included Beretta.

One thing is certain: the SIG came through the test with flying colors. Even Beretta fans do not attempt to debate the fact that the SIG P226 at the very least tied their favorite gun. Firearms historian Larry Wilson wrote the following in *The World of Beretta: An International Legend*.

“In winning the contract,” Wilson stated flatly, “the Beretta was one of only two candidates to complete satisfactorily the testing program. The other finalist was the Swiss-German firm of SIG-Sauer.” [\(1\)](#)



***Three generations of the 9mm SIG-Sauer P226. Top, the first classic: note unique checkering pattern on grips, internal extractor, hollow slide pin. Center, the next generation: note cobblestone pattern of grip roughening, external extractor, solid slide pin. Below, the latest: same as***

***center gun, but with Picatinny accessory attachment rail integral to dust cover of frame.***

Let's look at the perspectives of some other authorities. Vietnam combat vet and world-renowned authority on military small arms Chuck Karwan commented, "The P226 9mm was designed specifically to compete in the U.S. trials to replace the M1911A1 .45. It was co-winner of the trials but lost in the final bidding process to the Beretta M92F. Many, including the author, felt that the P226 was the better pistol." (2)

Another noted handgun expert, Tim Mullin, has this to say about the P226 in those U.S. military trials, "This is the pistol the U.S. military forces actually wanted when they adopted a 9X19mm pistols. ...(it was the choice of) many elite military units, the most famous being the Navy SEALs. After they broke the M92 repeatedly, they refused delivery of any more Beretta pistols and bought SIG P226 pistols instead. This pistol is also used by many federal law enforcement agencies." (3)



***Top, P226 from the early 1980s. This one has been retrofitted with short-reach trigger and Crimson Trace LaserGrips, and Trijicon night sights installed aftermarket in the mid-80s. Below, its successor: this is the "rail***

***gun” variation, with SIGLite night sights and standard length trigger. Both of these specimens are chambered for 9mm.***

Chuck Taylor is another highly respected authority on combat handguns. His take on the JSSAP trials goes thus, “(The P226) was originally designed to satisfy the criteria of the infamous U.S. military Joint Service Small Arms Program handgun trials, wherein many ‘in the know’ claim that the P226 actually outperformed the eventual choice, the Beretta M92.” (4) Appropriately enough, Taylor’s comments on the SIG P226 appear on p. 226 of the book in question, the fourth edition of the *Gun Digest Book of Combat Handgunnery*.

All these authorities have good opinions of the P226 pistol, and all are on record explaining why. “...while I feel the concept around which the modern high-capacity auto is based to be dreadfully ill-advised, I also feel that the P226 is one of the best-designed and best-built examples of the breed,” says Taylor. “It is extremely well made and finished, featuring a black anodized frame and Parkerized slide, and presents a formidable appearance, backed by solid functionality. It is one of the most accurate self-loaders I have ever fired and possesses well-conceived human engineering features.”

Continues Taylor, “Its decocking lever and slide lock/release are all centrally located for quick, easy manipulation. In addition, it feeds most anything you care to stuff into the magazine, including the latest exotic JHP designs. It field strips in less than five seconds. A rebounding hammer and white-dot-front, white-outline-rear sight combination completes its formidable package...One of the most user-friendly large-capacity DA autos produced, the P226 also points well and presents few edges to cut skin or abrade concealment clothing.

“So,” he concludes, “if you’re one of those who prefers a large-capacity auto, you can’t really go wrong with the P226. In fact, while it’s certainly no secret that I’m not an advocate of the concept, I find the P226 to be a pleasant gun to shoot and prefer it hands-down over all other large-capacity DA 9mm pistols. It isn’t a cheap gun, but it’s well worth its price.” (5)

“The SIG pistols of any style are always quite accurate,” explains Mullin. “They vary from excellent to outstanding in my experience.” He concludes, “I agree with the SEALS: if you can, pick the SIG over the Beretta...You

can't go wrong by selecting this pistol if you are looking for a full-size battle pistol.” (6)



***For many years, the P226 was standard with FBI SWAT and was issued to FBI Academy classes, as was the P228.***

Karwan quantifies his appreciation of the big SIG 9mm. “Of all the high-capacity 9mm pistols, the P226 has one of the most comfortable and naturally pointing grip shapes. The trigger reach is a little long for some people with small hands but SIG offers an optional short trigger to help in that regard. With good ammunition the P226 is on the average one of the most accurate service pistols on the market. Its double-action trigger is quite smooth and reasonably light, making the transition from a long double-action first shot to the subsequent single-action shots easy to accomplish...The P226 is expensive compared to some of its competition but it is a superbly made, very accurate, and very reliable fighting handgun.” (7)



***Since the thumb does not have to manipulate a safety catch on the frame or the slide, shooter with SIG P226 can take this extremely powerful “master grip” with thumb curled down and actually touching middle finger. It’s the strongest start for handgun retention if there’s a struggle for the gun, and no grasp is stronger when a pistol is fired one hand only. When thumb is curled down, it cannot ride the slide lock lever and prevent the slide from staying open on the last round, a common problem with some other right-handed grasp techniques.***

Wiley Clapp brings both police and military experience to the table when he evaluates handguns, which is something he has done successfully full-time for a number of years now. In the *Gun Digest Book of 9mm Handguns*, he wrote, “Apparently the (P226’s) magazine was designed with considerable care, as the gun fired without a single glitch in the course of hundreds of rounds. When the magazine design is increased to nearly double capacity, the butt becomes thicker. In the 226, the thickening of the butt section is far less objectionable than in other guns, because the butt has been subtly re-contoured. The bulk is held to a minimum and the more

rounded butt actually feels better than the original 220. That is not usually the case when a single-column design is altered to a double.”

Clapp goes on to say, “I fired the 226 extensively for this book. In the course of several hundred rounds downrange, I came to appreciate another feature of the pistol. The sights are excellent, among the best to be found on any of the myriad of handguns on today’s market. They are big enough to be seen, with a wide, deep notch and a prominent front ramped blade. Some versions of the SIG-Sauer pistols have sights highlighted with dots for better sight acquisition in low light situations. I don’t care for them. Double-action autoloaders have traditionally poor trigger pulls, at least in the DA mode. The 226 defies tradition in that the double-action pull on this pistol is very good. Once that first double-action shot is gone, the single-action trigger action for subsequent shots is fairly light, with only a small amount of creep. As the test results show, the 226 pistol is accurate, too.”

(8)



***The difference between two generations of P226. First Gen, top: Note that extractor is invisible, concealed inside the slide mechanism, and that the slide pin which holds the extractor is hollow. Current Gen, below, has beefed up extractor mounted outside the slide and securely pinned in place, and a solid steel pin has replaced the hollow one in slide.***

## Police History

When the big wave of police adoptions of high-capacity 9mm autos to replace traditional service revolvers hit in the early 1980s, SIG was there at the right time, in the right place, with the right product. The P226 took off like a rocket. What had started as a Three-way race between Beretta, SIG,

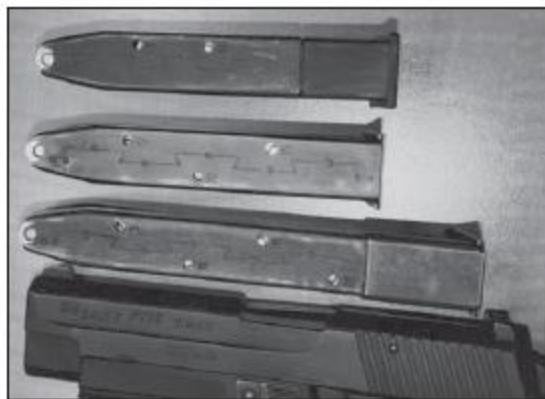


and Smith & Wesson would soon become a wider field as Glock and Ruger entered the market.

Competition was fierce. There were major departments that approved or adopted all these brands. However, as an instructor teaching nationwide and around the world at that time, it was my perception that the SIG pulled ahead, with the P226 being the top seller during that period.



***SIG P226 DAO is one of three 9mm pistols authorized by the New York City Police Department, and is seen by many officers as the most prestigious of the uniform guns on their “approved” list. It is almost certainly the most accurate of those three, as well.***



***Three styles of 9mm SIG P226 magazine. Top, a ten round “Clinton magazine,” once required for officers on NYPD, and useful for training or IDPA competition. Center: original 15 round SIG-Sauer P226 magazine. Below: Extended 20-round SIG P226 mag, popular with SWAT and Britain’s SAS.***



The Feds went to the SIG big time in the 1980s. It was one of the very first autoloaders authorized by the FBI for field personnel, and the P226 quickly replaced the high-capacity 9mm auto by another maker on the SWAT teams in every local FBI office in the land. The Bureau had input from British SAS, which traded their trademark Browning Hi-Power 9mm autos for the P226, citing its greater durability and reliability. The ATF and the DEA adopted the SIG, too. So did Secret Service and Sky Marshals, though they both went with the smaller P228 version. The U.S. Marshal's Service at that time gave its deputy federal marshals wide latitude in their choice of personal sidearm, and a huge number bought SIGs, often the P226.

The wartime draftee training doctrine of the military, the KISS principle ("Keep It Simple, Stupid!") had rightly or wrongly become part and parcel of most American police handgun training. It was felt that there were enough new skills to learn in transitioning from a revolver to a semiautomatic pistol without throwing in one more, such as the manipulation of a thumb safety.

If the pistol came with a lever on the slide that performed the dual functions of a manual safety catch and a decocking lever, recruits were told that it was a decocking lever only. But, it wasn't. If the officer used the typical U.S. military slide manipulation technique of grasping it overhand and jerking it to the rear, his thumb on one side and finger on the other tended to push the slide-mounted lever down into the "safe" position. Since he had been taught that the lever was a decocker, not a safety, by definition that officer had not been taught how to rapidly and reflexively off-safe an on safe gun. Thus, he would stand there pulling the trigger and wonder why his pistol was not firing.



***The P226 is an extremely controllable gun, particularly in 9mm. The 9mm brass in the air shows that Ayoob is firing rapidly, but note that the muzzle of the SIG is still dead on target for the next shot. Stance is the aggressive StressFire version of the Isosceles, and grasp is the “wedge hold.”***

My feeling was that if the lever was going to be used only as a decocker, it should function only as a decocker. The rest of the police community came to agree with me. The SIG-Sauer, unlike its competitors with similar double-action first shot pistols (later known as TDA, or Traditional Double Action), had a “slick slide.” It was simply not possible to inadvertently on-safe a SIG-Sauer, because there was no such device on the pistol.

Moreover, the SIG’s decocking lever was behind the trigger on the frame, not on the slide. This is a more ergonomic placement. Beretta, Ruger, and S&W eventually offered decocker-only models in which the slide-mounted lever was spring-loaded and could not go “on safe.” Nonetheless, there were two downsides to that design. One was that many officers found it awkward to reach their thumb to the slide to decock, and much more natural to bring the thumb down behind the trigger guard to perform the same function with a SIG. (A left-handed officer with a SIG would use the trigger finger to decock.) The other was that a palm-down slide manipulation could inadvertently decock a gun with a slide-mounted lever when the officer

didn't intend for that to happen, as when reloading or clearing a malfunction. This could be confusing in a high-stress situation...and it couldn't happen with a SIG. S&W copied the SIG-style decocking lever on the ill-fated Model 1076 10mm they developed for the FBI, and put it on some of their other TDA models (distinguishable by the suffix "26" in their model numbers). However, that version of the S&W decocker proved to be problematic, and S&W soon stopped making guns that way.



*Author finds the P226 an accurate pistol in general, and likes the fact that it gives consistent accuracy with a broad range of ammo, as with this 9mm example.*



*9mm Parabellum was the original chambering for the P226, and is still extremely popular.*



***Current “stippling” on grips instead of checkering pattern is extremely popular among P226 fans. The purpose is a non-slip grasp in the most stressful situations.***

The possibility of accidentally engaging the safety of a pistol with a slide-mounted lever was not just theoretical. Circa 1990 in Dade County, Florida, such an incident occurred in a gunfight. Dade County had authorized their deputies to purchase SIG, Beretta, or S&W 9mm autos, and in transition training the deputies were taught to treat the slide-mounted levers on the latter brands as decockers, not safeties.

The time came when a deputy with a new Beretta was the first to respond to a psycho firing a shotgun in a public place. When the shotgunner came at him, the officer fired one round and missed. Still new to the semiautomatic, he failed to return the trigger far enough forward to re-set it for the second shot, and when he pulled the trigger, the gun of course did not fire. Thinking it had jammed, he racked the slide with his non-dominant hand as he had been taught, clearing a live round from the chamber and cycling another one in. However, his hand had inadvertently pushed the lever down into the “safe” position as he performed the stoppage clearance drill. Now, as he attempted to fire on the gunman who was rapidly closing on him, the trigger moved uselessly under his finger. His life was saved when another policeman, off duty at the scene and armed with a slick-slide 9mm, shot and killed the gunman just in time.



***This P226 9mm is in its second generation of protecting the public. Originally issued to a trooper by the Michigan State Police, it was traded***

*in when MSP upgraded to the more powerful .40 caliber version of the P226. This officer purchased it second hand, and wears it to work daily today. It still delivers excellent accuracy and, as he demonstrates, excellent control.*



*Author found extremely uniform accuracy with a wide variety of 9mm ammo when shooting this P226 from the “auto hood position” at 25 yards.*

It should be noted that in writing the above, I am not condemning the concept of a safety/ decock lever. I am simply saying that if the decision is made to carry the gun off safe, the gun probably should not have an “on safe” option at all. Moreover, that if the design chosen is “decocker-only,” the frame-mounted decocker as on the SIG makes more sense for more people than does a decocker mounted on the slide. I’ve carried the Beretta, the Ruger, and the S&W TDA autos on duty, but always carried them on-safe and always practiced the off-safing movement as part of the draw, and taught it to my officers who also carried that type of gun.

The SIG, of course, had other attributes. No competitive gun had a better trigger in terms of smoothness of the first double-action shot and controllability of single-action follow-up shots. The trigger re-set of the

SIG-Sauer was just right for police work: Not so long as to be ungainly, but not so short as to allow a shaky hand to fire an additional shot unintentionally after the need to shoot had ended.



***Accuracy is the P226's calling card. Behold a one-inch five-shot group, fired at 25 yards from a bench rest with the most popular .357 SIG duty load, the Speer Gold Dot 125-grain jacketed hollow point (JHP).***

There was the reliability factor, too. The SIG was simply extraordinary in this regard. The good “feel” and “pointability” repeatedly cited by the authorities quoted above made for good, fast shooting in the hands of the average cop. Competence and confidence were both enhanced by this.

The SIG's inherent accuracy put it in the forefront, too. The experts cited above told you the straight stuff about that. In my job teaching nationwide, I got to not only intensively test every 9mm out there, but got to observe a great number of them in the hands of officers and instructors. As a rule, the SIG P226 would group tighter than the Glock, the Ruger, and the Smith & Wesson service pistols. Only the Beretta and two of HK's entries, which eventually numbered four, could keep up. The VP70Z, a machine pistol designed for cheap mass-manufacture turned into a cheap semiautomatic pistol, was never in the same ballpark with the SIG for accuracy, reliability, or ergonomics, and was soon mercifully discontinued. The current HK USP is a good gun, and spectacularly accurate in .45 ACP, but not so accurate in the 9mm specimens I've seen. The P9S, discontinued in the 1980s, would stay with or even exceed the SIG-Sauer for accuracy in 9mm, but design quirks such as requiring a pull of the trigger to decock made it unworkable for American law enforcement. The HK P7, then and now, could be expected to keep pace with the SIG in the accuracy department, but its



unique squeeze-cocking mechanism turned off as many police departments as its very high price.



***The Texas Department of Public Safety and the Rhode Island State Police both issue this .357 SIG P226 to their uniformed troopers. These guns combine great power with extraordinary accuracy, very good controllability, and the highest order of reliability. Full cartridge capacity is 13 rounds in the magazine, and one more in the firing chamber.***

Thus, if you're talking about maximum accuracy in a 9mm service pistol, and you want traditional design plus high reliability plus affordability, you're down to a two-horse race: SIG and Beretta. The two are almost indistinguishable in this regard, each occasionally beating the other, but if it came down to the wire I would have to admit that in my experience the average SIG P226 9mm will, just by a hair, shoot a little tighter than the average Beretta.

The P226 has a distinguished history in American law enforcement. It has been the service gun of the state police in Massachusetts, Michigan, and other states. Arizona troopers used to have a choice between two SIGs, the P226 in 9mm and the P220 in .45.

When departments have gone from the P226 to something else, it usually wasn't a brand change, but a power upgrade. Michigan and Massachusetts state troopers still carry SIG P226 pistols, but in .40 caliber, not 9mm. On the other hand, at this writing the Orlando, Florida Police Department, nationally famous for its professionalism and high-grade handgun training and performance, is still using the P226 9mm after many, many years. Their duty load is the Winchester Ranger 127-grain +P+ at 1250 feet per second. In a long list of shootings, this 9mm round has stopped the bad guys with

alacrity, curing the one thing that is really wrong with a 9mm, its limited stopping power in most available loadings.



***The P226 Rail model set up for home defense or police tactical work. InSight M3 tactical flashlight is mounted to the rail at the front of the dust cover, and a 20-round extended magazine is locked in place.***

## **Choice Of Experts**

Supervisory Special Agent Gordon McNeill was team leader of the FBI stakeout group that engaged the armed robbery and murder suspects Edward Matix and Michael Platt on April 11, 1986, in a suburb of Miami, Florida. Armed with a short-barreled six-shot .357 revolver, he fired the opening police shots of the encounter. He wounded Matix, but emptied the gun. Between his fourth and fifth shot a .223 rifle bullet fired by Platt smashed McNeill's gun hand. Unable to reload his revolver due to his injuries, he was about to turn back to his vehicle to grab his shotgun when Platt loomed up and shot him in the neck. The bullet left him partially paralyzed for life.

Largely as a result of this incident, the FBI soon authorized field agents to carry their own 9mm or .45 caliber pistols. Initially, only two brands were approved, SIG and Smith & Wesson. McNeill, still working for the Bureau in a teaching assignment despite his physical disabilities and still able to qualify to work armed, immediately purchased a 16-shot SIG-Sauer P226. After the horror of being helpless with an empty gun after six shots,



Gordon McNeill wanted increased and highly reliable firepower on his side. No one in the world can blame him. His choice of pistol was an excellent one.

Evan Marshall has been a friend of mine for going on 30 years. A survivor of multiple armed encounters during his distinguished career with the Detroit Police Department, he has for many years kept a running tally of gunfight reports from around the country and the world, and attempted to assess how well different calibers and loads worked in actual shootouts. His work has been controversial, but based on all my input, his conclusions about the relative stopping power of 9mm and larger caliber hollow-points are pretty much on the mark. He has no problem at all carrying a 9mm so long as it is loaded with an efficiently opening bullet in the 115- to 127-grain weight range at +P or +P+ velocity. And I've often seen him carrying a 9mm SIG P226 as his primary weapon.



***The P226 Rail's trademark is this extended dust cover portion of the frame.***

The late Robert Shimek was famous as an authority on classic handguns. What few of his readers knew was that he was also a career law enforcement officer. The gun that he carried on duty, right up through his retirement shortly before his untimely death, was a SIG-Sauer P226 9mm.

In police departments where there is a broad choice of options as to what gun to carry, it's always wise to look to see what the instructors are carrying. They see all the guns in action, and they know what works.

Consider NYPD. Requiring double-action-only 9mm pistols, the nation's largest police department (some 40,000 sworn officers) authorizes three specific make/models, one of which is the SIG P226 DAO. The SIG has become the "prestige gun" on that department. Its reliability is unbeaten, and it is more accurate than either of the other two approved pistols.

***Good sights are a feature on all the SIG-Sauer duty guns. This P226 benefits from night sights. Note proper grasp: web of hand high into the grip tang, and barrel in line with the long bones of the forearm.***



***"Stippled" front strap and back strap aid in secure grasp under the most adverse conditions of climate, circumstances, and stress.***

Chicago PD is our next largest police department, some 13,000 strong. There, too, double-action-only is a requirement for any autoloader carried to work. Approved calibers are .45 ACP and 9mm Parabellum; approved DAO pistol brands are Beretta, Ruger, SIG, and Smith & Wesson. A

majority of the Chicago PD firearms instructors I've run across carry the SIG.

The Sacramento County, California Sheriff's Department boasts some of the finest firearms training in the country. As proof, their individual officers and teams have brought back national champion titles in police combat shooting. The issue pistol is the SIG P229 in .40, but the deputies are authorized to carry any SIG from 9mm to .45 caliber. A disproportionate number of the firearms instructors – most of whom I've worked with as a guest trainer, and can attest that they're among the best in the country – choose the 9mm P226 as their uniform duty pistol. They appreciate its top-level accuracy combined with uncompromising reliability. Convinced by investigation of their department's many shootings that shot placement means more than caliber in ending a gunfight quickly, they've found the P226, with its light recoil and great ergonomics, allows them to put more bullets in the center, faster, than anything else.



***Inserting the index finger to the first joint will give maximum leverage on the trigger for double-action shots, and does not deleteriously effect control of subsequent shots in single-action mode. Pistol is a P226 Rail.***

## **P226 Choices**

Since the mid-1990s, the P226 has been available chambered for the .357 SIG and the .40 S&W. Each will hold two fewer of the large-diameter cartridges than the predecessor gun. Going from 16 of the 9mm rounds to 14 of the .40s or .357s is an upgrade as far as most people are concerned.

The .40 S&W cartridge in general is simply not the most accurate semiautomatic round available. That's as true in the SIG as anything else. I've found that it will certainly be accurate enough for police work or IDPA

competition, but it does not deliver the same high order of accuracy in the P226 as does the 9mm Parabellum round.

The .357 SIG cartridge is something else, though. With its high energy and high terminal striking power comes also a high order of accuracy. Simply put, the .357 SIG is an inherently accurate cartridge.

At this writing, the current president of SIGARMS is licensed to carry a concealed weapon. A big man, he carries a P226 in .357 SIG. He has no problem concealing it. And he uses the same gun to hunt deer!

George Harris, Bank Miller's right hand man at the SIGARMS Academy, brings a lot of real-world experience to the ranges and classrooms where he teaches. The .357 SIG is his hands-down choice of cartridge, not only for carry but for hunting. While he normally carries the compact P239 in that caliber, he also likes the P226 in .357, and last year, killed his annual buck with a single shot; quick and clean.

A few years ago, the Texas Department of Public Safety, which encompasses the state highway patrol, swapped the trusty P220 .45s they had carried for many years for P226 pistols chambered for .357 SIG. They have been delighted with the stopping power it has afforded their personnel in several gunfights since. Anecdotal reports indicate that the bad guys go down a little faster to the .357 SIG than to even a .45 auto.



***As with other SIGs in these calibers, the same magazine is interchangeable between .357 SIG and .40 S&W P226s. In fact, all that needs to be swapped to change caliber is the barrel.***

In one famous shooting, during the transition period between guns, two Texas highway patrolmen shot it out with a gunman ensconced in the cab of an 18-wheeler. The senior officer's P220 shot where he aimed it, but the wide, slow .45 slugs did not punch through the massive bodywork of the giant truck with enough authority to stop the offender. His rookie partner, however, was fresh from the academy with a newly issued P226 in .357

SIG. His 125-grain CCI Gold Dot bullets at 1350 feet per second drilled through the heavy cab and punched through their would-be killer's brain, ending the deadly battle instantly.

Steel-framed P226s are now available. I haven't really worked with them, except for the target model, which is just deliciously accurate and sweet to shoot.



*The P226 is an eminently “shootable” pistol when the pressure is on. Firing in front of a large class of students to “set the pace,” author shot this perfect 300 out of 300 score with sixty rounds of 9mm on the combat course. Thanks to the P226’s consistency of performance, such a target is pretty much replicable on demand.*

## **Personal Perspective**

If I sound high on the P226, it's not because it's one of my favorite guns and my second favorite SIG. Rather, those things are true because the gun

has proven itself in the manner described above. I use the P226 in its original caliber, 9mm, for several reasons that may or may not be relevant to your own needs.

First, I'm on the road a lot teaching, and usually flying. The airlines at this writing limit you to 11 pounds of ammunition in checked baggage. Eleven pounds of ammo means a lot more 9mm rounds than .40 or .45 rounds. When the Twin Towers were hit on September 11, 2001, my wife and daughter were in Nevada. Air travel shut down nationwide instantly, a situation that lasted for several days. Fortunately, I was able to fax my lovely bride a copy of her FFL, and she went to the nearest gun shop and bought the last suitable hardware that hadn't been cleaned off the shelf by panicky buyers. Ammo disappeared from dealers' shelves, too. They were stranded out there for a while. A lot of people had to make their way home on the ground, often hitch-hiking because the rental agencies had run out of automobiles, and the trains and buses were overloaded. If I have to make a long journey on foot or by thumb in a time of national emergency, I would find it much more comforting to have a lot of ammo in my backpack rather than a little. Unlike most police officers with issue ammo, when I'm on my own time I can carry whatever I want. Those 127-grain +P+ Winchester's, or Evan Marshall's favorite 115-grain JHPs at 1300 or more feet per second, will get the job done quite nicely in 9mm.

Other more routine job-related requirements exist. If I have to buy training ammo on the road, 9mm is cheaper than anything else. If I have to ship thousands of rounds ahead to a training site, the lighter 9mm ammo costs less. I put a couple of thousand rounds of 9mm through my P226 at my last busman's holiday at Chapman Academy.

I also compete whenever I can. The SIG pistol is very well suited to IDPA, where it is shot in the Stock Service Pistol (SSP) category. There, 9mm pistols compete with those chambered for .40 S&W, .357 SIG, and .45 ACP. I see no reason at all to have a .45 that only holds eight or nine rounds when IDPA rules let me have 11 in an SSP gun, and my 9mm SIG will take that many. I see no reason, either, to contend with .45 caliber recoil when I can shoot just a little bit faster against the omnipresent clock with a 9mm.

Each of us has our own job to do, and we pick our tools accordingly. However, in its broad caliber range of 9mm Parabellum, .357 SIG, and .40 S&W, the SIG P226 can literally offer something for everyone.

Of the many variations of the P226, and among the four P226 9mms that now rest in my gun safe, the one I prefer to use is the newest, the “rail gun.” The dust cover, or forward portion of the frame, is grooved to accept accessories such as an attached white light unit. (“White light” is the current way cool, high-speed, low-drag “tactical” terminology for “flashlight.”) I travel with an InSight M3 light in my carry-on luggage. At night, when I go to bed, I slide the flashlight onto the P226. I also do a tactical reload and swap out the pre-ban 15-round “carry magazine” of 9mm hot loads for a pre-ban 20-round magazine of the same ammo.

Do you wear a tactical load-bearing vest or magazine pouches to bed? Good. Neither do I. Police work has taught me that home invasions happen fast, and hotel room invasions happen faster because there’s less space to act as a buffer zone. I like the idea of one practiced movement putting everything in my hand that I need. A pistol with powerful ammunition; an ample supply of that ammunition already on board; light attached, with which to find, identify and blind my opponent; and, as icing on the cake, SIG-Lite night sights.

Another special-purpose P226 has already been mentioned: The double-action-only model as required by Chicago PD. For the armed citizen as well, the DAO concept bears looking at, if only from its civil liability defensibility standpoint, which, to be frank, is why so many police chiefs have specified it.

## ***References***

1. (1)Wilson, R.L., *The World of Beretta: An International Legend*, New York City: Random House, 2000, PP. 238-240.
2. (2)Karwan, Chuck, *The SIG-Sauer P226*, sidebar in *Standard Catalog of Firearms, 13th Edition*, by Ned Schwing. Iola, WI: Krause Publications, 2002, P. 958.
3. (3)Mullin, Timothy J., *The 100 Greatest Combat Pistols*, Boulder, CO: Paladin Press, 1994, P.381.
4. (4)Taylor, Chuck, *The Gun Digest Book of Combat Handgunnery, 4th Edition*, Iola, WI: Krause Publications, 1997, P. 226.
5. (5)Taylor, *Ibid.*

6. (6)Mullin, op.cit., P. 382.

7. (7)Karwan, op.cit.

8. (8)Clapp, Wiley, *The Gun Digest Book of 9mm Pistols*, Northbrook, IL: DBI Books, 1986, P. 209.



## Chapter 4



### *The SIG P228*



**A more compact version of the P226 9mm, complete with the bigger gun's reliability and accuracy.**

**I**ntroduced in 1988, the P228 is essentially a P226 9mm shortened at muzzle and butt for easier concealed carry. Despite a shorter (3.86-inch) barrel and proportionally shorter sight radius, the P228 delivers the same excellent accuracy of its big brother.

How accurate is that? I recently took a nearly new P228 to the range, equipped with a LaserMax sighting unit, which I turned off for the 25-yard accuracy testing. The 25-yard bench rest line I usually employ for this was in use, so I set up in one of the IDPA shooting bays, which had a Kriss-Kross barricade set up at the 25-yard line. This particular range prop gets its name from an IDPA match stage which forces the shooter to fire at three targets from each side of the barricade high, and each side of the barricade low, changing positions in a diagonal fashion. The cross beam marks the boundary between the high and the low positions. It is at a height where, with a minimum of contortions, I could brace the heel of the support hand on the cross beam and the back of that hand against the vertical portion of the wooden barricade at the same time. This allowed an unusually steady hold for a strong-side barricade position.

<u>Brand</u>	<u>Load</u>	<u>5-Shot group</u>	<u>Best 4 shots</u>	<u>Best 3 shots</u>
Black Hills EXP	115-grain JHP +P	3 1/2"	2 3/8"	2 1/8"
PMC	115-grain JHP	4 1/2"	2 1/2"	1/2"
Remington	115-grain JHP	2 15/16"	1 5/8"	1 1/8"
Winchester Silvertip	147-grain JHP subsonic	2 7/8"	1 3/16"	11/16"
Winchester USA	147-grain TMJ subsonic	2.00"	1 5/16"	1 1/4"

Five different loads were tested, running the gamut from 950 to 1250 feet per second in velocity and 147 to 115 grains in bullet weight, and encompassing four well-known brands. Each five-shot group was measured three times. The first measurement was all five shots, to indicate practical accuracy that could be expected in a solidly braced cover position. The second was the best three shots, always a good predictor of the gun's inherent mechanical accuracy with the given round since human error is largely accounted for. Finally, because this particular gun showed a very consistent "4+1" shot placement factor, the best four hits were also measured to get one more perspective on the gun's grouping tendencies. The results are shown above.

Ah, the unexpected changes and variables of shooting. Note that the ammo with the loosest overall group, PMC, also had the tightest measurement of 1/2 an inch in the Best 3 category with two shots in a tight double hole. Two out of five loadings gave Best 3 groupings of under an inch.



***This 2-inch group at 25 yards, fired from a barricade position with Winchester USA 147-grain subsonic, shows the P228's extraordinary accuracy.***

The “4+1” element was very consistent here, with the first hand-chambered shot always going higher than the subsequent four rounds that were automatically cycled into the firing chamber by the SIG's recoil-operated mechanism. The photos show that the groups tended to be larger in vertical measurement than in horizontal. The lateral measurement was only about 3/4 of one inch for the PMC, 2 inches for the Black Hills, and barely over an inch for the Remington, and so on.

The P228 was issued in the thousands by the FBI. Read the comments of Richard Law and Peter Brookesmith in *The Fighting Handgun* on the Bureau's temporary return to the 9mm after experiencing problems with their trademark 10mm. “The FBI, meanwhile, went back to 9mm after all, and in 1996 were issuing their agents with SIG-Sauer P228 pistols – a choice automatic, but not a .40.” (1) Law and Brookesmith, it should be noted, are advocates of larger calibers.



***The P228 succeeded in its design parameter, which was to be a concealable handgun of adequate power with a substantial magazine reservoir. The Outback concealed carry vest has worked well for the author and many of his staff, associates, and students.***



***This particular P228 shows “4+1 syndrome” with 147-grain subsonic ammo, but still shows splendid grouping potential.***

The FBI was not the only Federal law enforcement agency to adopt the P228. So did the Internal Revenue Service for its armed enforcement personnel. The DEA issued a great many P228s, and a number of U.S. Marshals have carried that sidearm as well.

The U.S. military, however, made the most striking purchase of SIG P228s by the Federal government. In what many saw as confession and atonement for the decision that had been made in the service pistol trials, the P228 was designated the M11 and issued to CID (Criminal Investigation Division, the “detective branch” if you will of the Military Police). Firearms

authority Tim Mullin had the following to say in his book *The 100 Greatest Combat Pistols*. “...(The) U.S. military really wanted the SIG P226 when it sought a 9X19mm pistol, but got stuck with the Beretta M9/M10. Well, some military units got around adopting the Beretta by opting for the SIG P226 anyway, rebuilding old Government Models (as did Delta), or buying Glock 21s, as did the Marine Corps.”

Continues Mullin, “After the M9/M10 was adopted, all of a sudden it dawned on some people that this was a *big* pistol. There were many different pistols in the U.S. military inventory simply because big pistols don’t work for every situation. But the military had spent a lot of money convincing Congress that it needed one caliber to rationalize ammunition control, 9X19mm. As soon as the call went out for a smaller pistol for women, criminal investigators, and others, the P228 was developed. Now, anyone who knows anything about guns knows that it is not the length of the barrel that makes it difficult to conceal a pistol, but rather its width. The P228 was shorter than the M9/10, but just as wide since it used a double-column magazine. If the military services needed a smaller weapon, you think they would have gone to the single-column version of the M92. Had they done that, the manual of arms training would have been the same. Instead, they adopted the P228, calling it the M11, which meant extra training. Of course, the P228 was merely a shortened version of the pistol they originally wanted, and that was probably the major element in the decision.” (2)

When Britain’s SAS adopted the P226 as its primary fighting pistol to replace its former trademark gun, the Browning Hi-Power, “the regiment” also acquired a quantity of the more compact P228s. Known to work in undercover/ plainclothes modes against terrorists, they wanted a handgun which would be reasonably concealable yet eminently shootable under stress. By all reports, they are delighted with both the P226 and the P228 in their respective roles within SAS mission profiles. Observes Mullin, “The British Army made a better decision in adopting the P226 for general use and the P228 for those requiring a smaller weapon. It would have been even better for it to have taken the P225, but high-capacity autoloaders are the rage for those who plan to miss a lot.” (3)

The P228 was not limited to plainclothes operatives, however. Many police departments thought enough of the gun that they adopted it

department wide, issuing it to uniformed officers as well as plainclothes investigators. The rationale was that with 14 shots (13 in the original pre-ban magazines and subsequent LEO magazines, and one more in the firing chamber), the P228 brought them nearly equal the firepower they would have been afforded with the larger SIG P226. They also had a pistol which, being shorter overall and particularly in the butt, was much more amenable to concealed carry.



***P228, below, is descended from the P226, above.***

This has several advantages. Many private citizens looking at police weapons purchases do not take into consideration that today's uniformed officer is tonight's off-duty cop, and tomorrow's plainclothes investigator. If you issue separate guns for uniform division and detective division, there are extra guns that must be accounted for to the bureaucracy. There are extra training hours and qualifications that must be scheduled when a uniformed patrolman is promoted to detective, or when a detective is promoted to sergeant and rotated back to uniformed patrol.

Some police departments still require their sworn personnel to be armed at all times when off duty except when they plan to consume significant quantities of alcohol. Most, at minimum, encourage off-duty carry. Only a handful of agencies (in the United States, at least) forbid their cops from carrying on their own time.

For the off-duty policeman and his department *and* his firearms instructors, having one gun for both plainclothes and uniform wear solves many problems. It guarantees that the officer will have maximum familiarity, confidence, and competence with the one gun he has trained with most, and carries all the time. It is one less gun to keep track of in terms of department records. It is one less set of skills the officer must

learn, and one less set of qualifications that the often beleaguered range staff must put him through.



***P228 is shown with optional extended floorplate magazine...***

Consider the Vermont State Police. When they switched from the six-shot revolver, the pistol they adopted was the SIG P228. Troopers carried it in exposed duty holsters in uniform. Plainclothes officers carried it in concealed, safety-strapped holsters. And all sworn personnel, no matter what their assignment or daily dress code, had it to carry off duty.

The result was uniform competence and confidence with the State Police sidearm. The troopers I talked with loved the pistol for its reliability, its good fit to the hand, its light weight on the hip during a long tour of duty, and its comfort and discretion in concealed carry. Similarly, the instructional staff sang its praises. The troops shot it well, found it quick and easy to learn, and were able to easily maintain it in perfect condition.

In the end, the only reason the Vermont State Police traded in their P228s was that the agency found the same fault with it that Law and Brookesmith had. It was a 9mm, and they decided that the more potent .40 S&W caliber would be a better choice. The VSP traded up to the SIG P229 in .40 caliber. They still carry the same gun on and off duty, in uniform or in plainclothes. They still appreciate compactness with firepower as afforded by a double-stack compact pistol. And they still swear by their SIGs.

America's armed citizens also liked the P228. From the time of its introduction to the coming of the high-capacity magazine ban in 1994, we saw a great many of them in the civilian classes at Lethal Force Institute.



The owners were usually licensed to carry concealed unless they came from a state with no provision for such a permit, and they appreciated the P228's concealability as much as any plainclothes cop, and found the small, high-capacity pistol substantial enough for the added function of home defense. Once again, the dual-purpose thing kicked in: The carry gun could also function admirably as the house gun.



*... which when inserted, better fits the hands of some shooters.*

After the Clinton magazine ban, we saw a shift in what might be called “SIG demographics” among the civilian students. Before, we had seen both the P226 and the P228 in copious numbers. Gradually, we saw the P226s replaced by P228s, P220 .45s, and P239s when the latter became available. The civilian market had decided, reasonably enough, that a full-size 10-plus-one-shot pistol was less efficient and therefore less desirable than a full-size 15-plus-one-shot pistol. The P228, on the other hand, suffered less by comparison. Proportionally, a 10-plus-one-shot compact pistol is not so much less efficient than a 13-plus-one-shot compact pistol.

However, while some citizens who formerly would have purchased P226s went to the P228, I had a sense that more were going to the P220 in .45 ACP and particularly the “personal size” P239 when it came out. A distinctly smaller gun than the P228 and holding only two less rounds of 9mm ammunition, the P239 in that caliber seemed a more advantageous design to a number of buyers who were interested in that caliber. The compactness of the P239 coupled with the power of its two other optional



chamberings, .40 S&W and .357 SIG, switched still more buyers from the P228 to the P239.

Today, the SIG P228 remains an excellent pistol. Even at inflated “post-ban” prices, pre-ban magazines of full capacity were absolutely worth it to private citizens who appreciated the pistol’s reliability, accuracy, compactness, and shooting characteristics.

The P228 is the concealed carry choice of John Hoelschen, a Special Forces trainer whose teaching encompasses CQB, unarmed combat, and field treatment of gunshot trauma. John has won the demanding National Tactical Invitational with his personal P228. When John Hoelschen talks, wise people listen. When he acts, wise people follow his actions.

For many years, the P228 was the preferred sidearm of Duane Thomas, a gun writer who shoots a lot, competes, and teaches. He performs well in all these endeavors, and he takes his personal self-defense very seriously. Duane spoke dryly of his P228’s “almost boring reliability,” and in the end, that says a lot.

## **P228 Idiosyncrasies**

All standard advice for the SIG-Sauer system applies. Remember that with the shorter grip frame, as with all auto pistols that have this feature, there is a chance of the flesh of the pinkie finger being pinched between the magazine floorplate and the bottom edge of the frame during a fast reload. Learn to keep that finger out of the way during the loading/ reloading process.

SIG magazines are preferred. MecGar is the only other brand of magazine I would trust in the P228 pistol. SIG now offers an attachment for P226 magazines that allows them to fit in the P228 without a gap in the frame. The larger magazines work fine. This attachment gives the shooter a surer grip, and is also more esthetically pleasing. It has been suggested that this adapter also acts as a “magazine stop” to keep the mag from traveling too far upward when slammed into the gun. I suppose that’s true, but my experience is that even *trying* to jam the pistol by vigorously slamming a P226 magazine into a P228, I have been unable to cause a problem. The tapered magazine, by its nature, does not want to over-travel, a problem

which occurs epidemically in short-butt 1911 compacts when loaded at slide-lock with single-stack Government Model magazines which do not have the natural detent effect of the double-stack SIG's tapered magazines. Because the P226 was in production much longer before the ban on full capacity magazines, there are more pre-ban P226 magazines than pre-ban P228 magazines available on the legal market.

Some shooters have commented that in general, the P226 action feels smoother and lighter than that of the P228. While that may have been true to a minor degree in the early days of the P228, in recent production runs the P226 and P228 are virtually indistinguishable from one another in this regard. Both are very smooth, with very crisp and controllable single-action pulls and a proper re-set distance for defensive work.

The P228 seems to be extraordinarily reliable with a broad range of ammunition. The 147-grain 9mm subsonic, which I've seen cause sluggish cycling and even malfunctions in some competitive brands, doesn't seem to bother any of the SIGs including this one. The 115-grain bullet at 1350 feet per second, which has established such an enviable "stopping power" record in real world shootings and test shootings of animals, works perfectly in the P228. This round has been known to occasionally cycle a P225's slide so fast that it will close before picking up the next round from its single-stack magazine. This does not seem to happen with the P228, whether you use pre-ban, post-ban, or LEO magazines. The military's hot NATO ammo – hotter than domestic +P+, if you look at the pressure tests – cycles just fine in the M11/P228, as the military has found for years. There are no reports from the military of the M11/P228 failing to stand up as expected to this high-powered ammunition.

Using the same ammunition, I don't find the P228 to kick any more than the P226. This sounds counter-intuitive, because the larger and heavier pistol is supposed to absorb more of the recoil impulse than the smaller and lighter one, but it's simply an honest and true observation. Some shooters even perceive that the P228 jumps less than its bigger brother, theorizing that the shorter slide is traveling less distance and therefore moving the pistol less during the cycling process. All this is highly subjective. Suffice to say that the P228 is an extremely light-kicking handgun.

## In Summary

Well conceived and well executed, the SIG P228 is a splendid example of the compact, high-capacity double-action 9mm pistol. It is extremely reliable and eminently shootable. Delivering a 2-inch group for five shots from a barricade position, and showing potential for sub-1-inch groups at the same 25-yard distance, it is one of the most accurate of its breed. The P228 is, overall, an excellent handgun.

### *References*

1. Law, Richard and Brookesmith, Peter, *The Fighting Handgun*, London: Arms and Armour Press, 1996, P.157.
2. Mullin, Timothy J., *The 100 Greatest Combat Pistols*, Boulder, CO: Paladin Press, 1994, P. 385.
3. Mullin, *Ibid.*

## Chapter 5



### *The SIG P229*



**S**mith & Wesson and Winchester jointly introduced the .40 S&W cartridge in January of 1990 at the SHOT (Shooting, Hunting and Outdoor Trade) Show in Las Vegas. I was there. Instantly, the industry jumped on the bandwagon of this new “compromise cartridge.”

But not the *whole* industry. While some of the subsequently introduced .40 pistols were simply rechambered 9mms, SIG’s research indicated that the high slide velocity and sharp pressure curve generated by the powerful new cartridge warranted a significant redesign before any new pistol should

be chambered for it. SIG waited until their designers got it right. In 1992, when SIG introduced the P229 in that caliber, the wait was rewarded with a gun that *worked*.

The P229 is also available in .357 SIG (introduced in 1994) and 9mm Parabellum, but it has been overwhelmingly most popular in the .40 S&W chambering around which it was designed. Identical in height, length, and silhouette with the P228 9mm compact, the P229 is distinguished by a more rugged slide, which is slightly thicker and adds some weight to the pistol, which goes about an ounce and a half more on the scales than a P228. The P229's slide has narrower slide grasping grooves than other SIG-Sauer pistols, blended in with what might be called the "reinforcing band" of added metal along the bottom edge of the slide, which gives the slide and the pistol the necessary added weight. On some pistols, notably the CZ75 style with strong recoil springs, as in the European American Armory (EAA) Witness 10mm model, these smaller slide grooves can make for tenuous grasping and set the stage for fumbles during handling. The shape of the slide grasping grooves on the P229 is such that this does not seem to happen with the SIG pistol.

The slide differed not just in size and shape but in construction. A friend of mine, gun expert Walt Rauch, explains: "The SIG P229 is one of the compact versions of the SIG P226 with one major change from its close relatives, the P225 and P228. The P229 slide is machined from a billet of stainless steel and then blackened to match the frame. The others use slides formed from stamped steel with a steel breechblock pinned into the frame. The all-steel slide came about with the introduction of the .40 S&W cartridge to better handle this high-intensity round and increased the gun's weight by a little over an ounce."[1](#)

***An interesting depiction of the P229 put forth by SIGARMS when the gun was introduced. Note the absence of markings on the pistol.***



The P229 met with instant success in the law enforcement community. With 12 rounds of .40 S&W or .357 SIG ammo in the magazine or 13 rounds of 9mm, plus one more in the firing chamber, it more than doubled the cartridge capacity of the service revolvers it replaced. Like the P228, it was light and compact enough for plainclothes carry, making it a “gun for all seasons” suited to uniformed officer, detective, and off-duty policeman alike. It merely offered more power in the same size package. Indeed, the Vermont State Police swapped their 9mm P228s for .40 caliber P229 pistols.



***The P229 in .357 SIG has proven to be an awesomely effective manstopper on the street.***

The P229 has earned an excellent reputation in all three of the calibers in which it is offered. The gun stands up well in constant training fire. Let's look at some major police departments that have adopted it in its various chamberings.

**.40 S&W.** The Sacramento County, California Sheriff's Department has had good luck with its SIG pistols for many years. Up through the mid-1990s, deputies had the choice of the 16-shot 9mm P226 or the eight-or-nine-shot (depending on the generation of the magazine) P220 .45, with the larger caliber SIG issued to the SWAT team. In the late 1990s, the department decided to split the difference and adopted the .40 caliber P229 as standard issue, though deputies are still allowed to carry the P226 or P220 if they prefer. The guns have worked out well. I was recently retained as an expert witness on behalf of two Sacramento County deputies who had shot a man who was wielding an edged weapon. Of the several shots fired, the great majority struck the target. SCSD's excellent training held for them; they immediately decocked and safely holstered their weapons and offered what first aid they could to the neutralized subject. The suit against them was thrown out on a motion for summary judgment.



***An LFI student hammers down falling plates, shooting from right to left, with his .40 caliber P229 during a StressFire class.***

The Arizona Department of Public Safety did something very similar. They had long before traded in their S&W Model 15 Combat Masterpiece .38 Special revolvers for SIG pistols. Troopers and conservation officers were given their choice of the 9mm P226 or the P220 .45, with the overwhelming majority choosing the latter. There was pressure for uniformity, however, and again, the essential compromise nature of the .40 caliber round made itself felt. Like Sacramento County, Arizona DPS traded in both the P226 and the P220 for the P229 in .40, which became standard issue for all personnel. A 13-shot .40 caliber weapon split the difference between a 16-shot 9mm and an eight-or nine-shot .45.

Connecticut's state troopers were the second in the country to get semiautomatics, choosing a popular high-capacity 9mm. When the Connecticut State Police decided to power up from the 9mm to the .40 S&W cartridge, they changed gunmakers, too. The pistol they chose was the SIG P229.

**.357 SIG.** The Delaware State Police had switched from revolvers to the compact Smith & Wesson 9mm auto, using the 147-grain subsonic hollow-



point. They had loved the gun but hated the cartridge. When they decided to power up, an exhaustive test led DSP to the SIG P229 in caliber .357 SIG. It embodied the compactness and light weight the troopers had come to appreciate with their Smith & Wessons, with a .357 Magnum potency level. The Delaware troopers had just become the first major department to adopt the new pistol caliber. They would not be the last.

The Virginia State Police had, in the late 1980s, decided to follow the FBI's lead and adopt the 10mm Auto cartridge in the Smith & Wesson Model 1076 pistol. As with the FBI, this proved to be a debacle. "Designed by committee," the 1076 in many of its production runs lacked the durability and reliability of other third-generation S&W service automatics. VSP dumped those guns and bought SIG 9mm pistols for all the troopers, stoking them with the 147-grain subsonic hollow-points that FBI was strongly recommending for the 9mm cartridge. In an experience that mirrored Delaware's, the troopers loved the reliable, accurate, easy-shooting guns, but learned from collected experience to distrust the cartridge. In a decision that also mirrored Delaware's, after a lengthy test/evaluation period and extensive research, Virginia State Police adopted the P229 in .357 SIG.

In a bigger state than Delaware, the .357 SIG quickly had a chance to strut its stuff. At an ASLET conference years later in Virginia, I was able to talk with troopers of varying ranks about the SIG .357s, and their approval was unanimous. "We had been having to hose pit bulls with most of a magazine of 9mm subsonics before they'd go down," said one source, "but with the P229 and the 125-grain Gold Dot .357 SIG rounds, one shot is usually enough now." Said another, "What's really most impressive is how many bad guys have gone down with a single, non-fatal hit," said another. "We're really impressed with the stopping power of the .357 SIG round."

Federal law enforcement has gone to the P229 in .357 SIG in a big way. This gun in this caliber is standard issue for the United States Secret Service, and for the Air Marshals. Issue ammunition is the fast 125-grain hollow-point, Speer's Gold Dot or Winchester's Ranger Talon. Both rounds have been issued by both agencies. Air Marshals have had no shootings yet, but shootings reported by Secret Service indicate that the superb stopping power for which they chose these guns was delivered on the street. Secret

Service and Air Marshals had already had the P228 9mm for many years before switching to the P229 in .357 SIG.

**9mm Luger.** The slightly greater weight of the P229's slide reduces the recoil of the already light-kicking 9mm more than you might think. It's as if you were shooting a steel-frame 9mm. This has made it one of the favorite guns of IDPA shooters in the Stock Service Pistol category.

The San Diego Police Department is one of the few major PDs still requiring the 9mm for duty. For many, many years officers were issued the Ruger pistol but authorized to carry their own SIG, Beretta, or S&W 9mm autos. The SIGs were always extremely popular. A couple of years ago, the department switched to the P229 in 9mm as the standard-issue sidearm. San Diego cops tell me they've found the P229 to be every bit as reliable as the famously rugged Ruger, but easier to shoot well, with slightly lighter recoil and with better inherent accuracy.

## Accuracy

In 1998, SIGARMS introduced the P229 Sport. Made with a stainless steel frame and fitted with a 4.8-inch barrel and recoil compensator, this adjustable-sight pistol is *sweet!* I did the introductory article on it for *Combat Handguns* magazine, and watched one of SIG's testers shoot groups with it that hovered around an inch at 25 yards.

It is not exactly clear what this particular SIG target pistol is best suited for. Chambered in .357 SIG, the P229 Sport is more powerful than necessary for IPSC, in which any competition category where you can use a compensated gun is one in which the double-action first shot would be more hindrance than help. The compensator makes it ineligible for IDPA matches.



***Petite Tara Miller shows the controllability of the SIG P229 with the hottest ammo. The spent casing is visible above her head as the pistol is caught by a fast lens in mid-cycle.***

The .357 SIG is certainly suitable for deer hunting. George Harris of SIGARMS Academy has for years taken his annual whitetail with a SIG .357 pistol, but he uses a street gun, not a target model.

Personally, I think the market for the P229 Sport is the connoisseur of fine firearms who simply enjoys a powerful pistol with moderated recoil and flat trajectory, which delivers superb accuracy and is shootable enough to let that accuracy translate to human hands. I don't see it so much as a competitor's gun, but rather, simply an enthusiast's gun.

However, you don't need the target model to get accuracy out of a P229. All you need is either the .357 SIG or the 9mm version of the standard model.

In .40, the P229 gives decent accuracy but not great accuracy. As commercially loaded, the .40 S&W cartridge simply is not among our most accurate rounds. I had a P229 .40 and liked it, but found that like most such

guns I've tried, it grouped five shots into 3 to 4 inches at 25 yards. My P226s and P220s did much better, and I decided that for my own needs, the P229 in .40 caliber was redundant. My chief of police liked the gun, however, so I sold it to him for what I had in it. He carries it often as an off duty pistol. We later discovered that with Black Hills 165-grain EXP ammo, this particular P229 could deliver a "personal best" of about 2 inches for five shots at 25 yards. I've won three state championships with Black Hills 165-grain EXP .40 S&W ammunition. In the last several tests I've done of .40 caliber pistols, this has proven to be the most accurate round in seven or eight of them. Passing all the FBI Protocol tests with flying colors, and imbued with the superb match-grade quality control that has made Black Hills Ammunition famous, this cartridge is comprised of a 165-grain Speer Gold Dot bullet loaded to a nominal velocity of 1150 feet per second. Recoil is distinctly snappier than the typical first-generation 180-grain subsonic .40 JHP, but the improved performance is more than worth it.

In 9mm Luger, however, the P229 gives you the same delicious accuracy you can expect from its near-twin, the P228. And it does so with perceptibly less recoil. I think the 9mm P229, fitted with the short-reach factory option trigger, is close to ideal for the recoil-sensitive shooter.

In .357 SIG, however, the P229 reaches a newer and loftier level of accuracy. Yes, the expensive Sport model delivers those fabulous one-inch groups. However, the standard service model P229 .357 can be expected to deliver between 1 and 2 inches at 25 yards with the loads it likes best.

In each caliber, the P229 is something of a "niche gun." The P229 .40 may well be the most popular currently purchased police handgun in the SIG line and one of the most popular law enforcement handguns, period. It is compact, reliable, and user-friendly. The P229 9mm is one of the best possible choices for the recoil-sensitive shooter whose fingers are long enough to be comfortable around the grip-frame of a pistol with a double-stack magazine. The P229 in .357 SIG is arguably the best of the breed, with an optimum balance of weight and size with match-grade accuracy, superb shootability, and awesome power for self-defense.

## ***References***

1. Rauch Walter, "New Sigarms P229KDAO .40," Combat Handguns magazine, Feb. 2004, P. 13-14.

## Chapter 6



### *SIG's .380s: The P232 and P230*



**I**n June, 2003 Trish Brown, a slender 26-year-old, stepped to the firing line for the qualification course that capped her 40 hours of training in an LFI-I class. She was the only female in class – I something unusual for an LFI program – but her male classmates were supportive. Still, she had taken some ribbing about being the only person there shooting a “mouse gun”: a .380 caliber semiautomatic pistol.

Sixty rounds later, a tie was announced for first place. Two shooters had scored 299 out of 300 on the demanding police-style qualification course, with an IDPA target whose maximum five-point scoring zone is only about half the size it would be on a regulation police silhouette. The winners were

a tall, powerfully built ex-Marine with a target-grade 1911 .45 auto and Trish, with her SIG-Sauer P232 pocket pistol. All of a sudden, no one is teasing her about her .380 any more.

The SIG is universally recognized as one of the finest .380s ever made. Many experts consider it *the* best handgun ever produced in its caliber. With its barrel affixed to the frame, it offers superb inherent accuracy potential. Its low-pressure cartridge requires less mass of metal surrounding it, and consequently, it is the thinnest and “flattest” pistol in the SIG-Sauer line. Particularly in its aluminum-frame version it is extraordinarily comfortable to carry concealed for long periods of time. It shares the smooth, easy double-action trigger pull and crisp, clean single-action pull of its larger siblings. With no manual safety, it is quick to deploy. Unlike many .380 autos of both single-and double-action design, it was built to be safe to carry with a cartridge in the chamber. It is ready to fire swiftly and reactively by simply pulling the trigger, yet immune to an accidental discharge of the “inertia fire” type when dropped or struck.

This is a very important feature in a “pocket auto.” As their colloquial name implies, these handguns are designed to be carried in a trouser pocket or coat pocket, and because of their convenient size and light weight, they are often carried in a purse or fanny pack. A coat or pair of pants with a pistol still in the pocket may be tossed onto a bed or chair, miss, and hit the floor. A belt pack or purse may likewise be dropped to a hard surface. In any of these scenarios, a pistol that is not drop-safe may accidentally discharge. Thanks to its intelligent design in this regard, this is not possible with one of the SIG .380s, even with a round in the chamber.



*This is Trish, the young lady who tied for first place in her class with a superb 299/300 qualification score, using a SIG P232. In fact, she managed it twice in a row. The targets tell the tale.*



*The P232 is a sleek pistol, accurate for a “pocket gun.”*



Another design advantage of the P232 and P230 is the traditional SIG-Sauer decocking lever located behind the trigger guard on the left side of the frame. Even more than with the larger models, this is advantageous on the small guns because, especially in larger hands, pocket-sized pistols can be awkward to decock if the lever is located up on the rear of the slide.

## **P230 to P232**

The P230 was produced from 1976 to approximately 1998. For the worldwide market it was produced in four calibers. Notes gun expert Ned Schwing, “This is a semi-automatic, compact, pocket-type pistol chambered for .22 LR, .32 ACP, .380 ACP, and 9mm Ultra. It has a 3.62-inch barrel and either a 10-, 8-, or 7-round magazine, depending on the caliber chambered.” (1)



*A fixed barrel, a’la’ Walther PP series, is one explanation why these thinnest SIGs are unusually accurate for .380 pocket autos.*



***For a .380, the P232 gives above average accuracy at 25 yards.***

The 9mm Ultra P230 is a serious collector's item. For that matter, good luck finding a P230 in the United States in any caliber but .380. This was simply the caliber Yanks wanted if the gun was going to be the same size in .32 ACP anyway.

The blue version with an aluminum alloy frame weighed 16.2 ounces unloaded. SIG later introduced an all-stainless version, which tipped the scales at 20.8 ounces. They were equally smooth of action and equally accurate. Here we had a quandary. The stainless was less likely to rust when carried tight next to a hot, sweaty body, which is where particularly slim and flat auto pistols often wind up in real-world use. However, the lighter alloy frame just felt more comfortable in the same kind of carry.

For me, having one of each, the solution was simple enough. I put the stainless slide on the blue aluminum alloy frame. It gave me the best of all worlds, and the hybrid P230 functioned as if it had been made that way.

The P232, introduced in 1998, is an updated P230. Plastic checkered grips were replaced with plastic stippled ones, in keeping with a change all the way across the SIG-Sauer lineup. They really did feel better in the hand. The slide cuts were updated to a much more ergonomic and functional pattern. The decock lever spring was now attached to the frame in the same manner as bigger SIGs, which made detail stripping easier. The sights were redesigned to allow them to take Tritium inserts.

The basic function, accuracy, and reliability did not change appreciably between the two models. The P232 is generally encountered in the stainless

format.

How accurate is the pistol? It won't give you the groups you'll expect from a P226 or a P220, but it will outshoot the great majority of .380 autos that are out there. One quick and dirty test at 25 yards with a well-used P232 gave these results:

Brand	Bullet	5-Shot Group	Best 3 Shots
PMC	90 gr FMJ	3-13/16"	2-5/16"
Rem. Golden Saber	102 gr JHP	3-5/8"	1-13/16"

## Handling the SIG .380

The P232 is the one SIG-Sauer still made with the European-style magazine release with the latch at the heel of the butt. Use the techniques for speed reloading and tactical reloading that are found in the chapter on manipulating the SIG-Sauer pistol. The butt release makes particular sense when a handgun this small is to be used in large hands. That is because a release button located behind the trigger guard on the frame, in the position Americans traditionally prefer, is all the more likely to be accidentally released by the normal grasp of a hand that may be literally too big for the pistol.



***Homage to Walther PP/PPk is obvious when a SIG .380 is field stripped...***

These guns have one design feature I don't care for, which they share with the Walther, the S&W Sigma, and many other .380s: they do not have

a dedicated slide lock lever. If there should be an extraction failure, resulting in a spent casing trapped in the firing chamber and held there under the great pressure of the slide pushing the next live round against it, the stoppage will be much more difficult to clear without a lever that can be used to mechanically lock the slide to the rear and relieve this pressure.

In this situation with a bigger SIG, you would simply retract the slide to the rear and thumb the slide lock lever upward. This would relieve slide pressure against the topmost round in the magazine and facilitate the removal of the magazine and manual ejection of the empty casing, to be followed by a reload to get the pistol back into action. Since the .380 SIG lacks this feature, such a stoppage must be handled differently.

With the .380 SIG, you would keep a firm grasp of the grip frame with the firing hand and use your support hand to draw the slide all the way back. Now, using the web of the firing hand under the frame's grip tang as a pivot point, you would pivot your firing hand up into the "armorer's grasp," as shown in accompanying photograph. The web of the hand is now clamped securely at the inside curve of the grip tang on the frame, while all four fingers now wrap around the slide from above, holding the slide back against the recoil spring's tension with a very firm grasp.

With the thumb of the free hand, you now push the butt heel magazine release backward, while your middle or index finger pulls downward on the lip of the magazine's floorplate. This will prove difficult, because in a malfunction of this type the topmost live cartridge in the magazine will have been pushed forward. The cartridge's rear end is still held firmly by the magazine's feed lips, while the front portion of its bullet is dragging on the pistol's feed ramp. Thus, a very forcible pull is required to extract the magazine. Once this is accomplished, the firing hand pivots back down into a firing grasp, holding the frame securely while the free hand activates the slide. Work the slide until you see the spent casing fly clear (or three times, to fail-safe yourself in the dark). Then reload a fresh magazine, operate the slide one more time to chamber a round, and you're ready to fire again if it is still necessary to do so.



*...but the fire control functions and even takedown latch are pure SIG-Sauer.*



*The fastest way to operate the release is this method shown by Jim McLoud, Jr. The thumb works the lever, while the middle finger pulls down on magazine's floorplate.*



***High-traction slide grasping grooves and a heavy duty externally mounted extractor are hallmarks of the P232.***



***Since the neither P230 nor P232 comes with a slide stop lever, reload is completed by tugging back on the slide as shown and letting it fly forward to chamber a round.***

There is one more design feature not found on other SIG-Sauers that can prove to be problematical in shooting these smallest SIGs. In keeping with their need to be small and low-profile, they have a slide that is mounted very low on the frame. Thus, in all but the smallest hand, the sharp edge of the slide can bite the hand as the pistol cycles in firing. The contact point is usually at the proximal joint (base joint) of the firing thumb.

With a very fleshy hand or with a glove, this contact can slow down the slide sufficiently to jam the P230 or P232. With almost any hand, a long sequence of fire will result in laceration. We advise students with these pistols to proactively put a Band-Aid on the hand, with its padded portion covering the base joint at the point shown in photos. The bandage is applied prophylactically, as it were. As they say in safe sex lectures, “wrap that rascal.”

## **The Question of Caliber**

It was mentioned earlier that the reader has a right to know the biases and prejudices of the writer. Just as I’ve made it clear that I’m biased toward the P220 .45, my favorite SIG, and toward the P226, my close second favorite, it’s only fair to disclose that the P230 and P232 are my least favorite SIGs.



***Recoil is mild in this blowback .380.***

Part of that is a prejudice against its caliber. I was the guy who said, “Friends don’t let friends carry mouse guns.” While some gun experts list the .380 as a minimum caliber for self-defense, I’m among the many who draw the line just above it, preferring the 9mm Parabellum as the minimum standard for personal protection use in a semiautomatic pistol. There are simply too many cases that have occurred where the .380, a.k.a. “9mm Short,” lived up to its alias and came up short in stopping power.

This is not to say that a .380 SIG can’t save your life. Let’s look at three instances where the SIG .380 did just that. In the first case, a particularly violent male suspect who attacked a female officer in Pennsylvania went for her service pistol. He was gaining control of the weapon and obviously intent on murdering her with her own gun when, in desperation, she pulled her backup, a SIG .380. She fired one shot into his brain, killing him instantly and just as quickly ending the murder attempt.



***Since like many other small .380s it lacks a slide stop, the P232 (shown) or P230 must be taken like this in “armorer’s grasp” to clear a “double feed” type malfunction.***

In the second case, a petite female came home and encountered a burglar in her Oregon home. He approached her menacingly with what appeared to be a weapon in his hand. Licensed to carry, she drew her SIG P230, leveled it at him, and did exactly as she had been trained at LFI. Neighbors heard her yell, “Don’t move! Drop that weapon!” He ignored her commands and came at her, and she fired. Her first .380 JHP struck him in the wrist, breaking it. He looked at her and said numbly, “You shot me.” He then came at her again, and she fired a second time. He stopped and grimaced, then slowly put one hand on his chest where the bullet had struck center, punching through the aorta. Then he put his other hand on the same spot. Very slowly and carefully he sat down, then lay down. He closed his eyes... and did not open them again.

In the third instance, a California deputy sheriff was off duty on medical leave subsequent to surgery for a severe injury to his right wrist. This was his gun hand. Uncertain whether the knitting joint could handle the recoil of his preferred on- and off-duty gun, a SIG P220 .45, he borrowed his wife’s P230 to put in his fanny pack. He and his wife and young boys were



spending a pleasant day with his elderly parents, safely plinking with .22 rifles on the parents' rural property, when a tall man burst onto the scene, raving obscenities and threats and trying to grab the loaded rifles away from the boys. The off-duty cop tried to stop him physically, but the man proved immune to kicks and, with only one functional arm, the deputy knew that grappling would be futile. He drew the SIG .380, identified himself as a law enforcement officer, and ordered the suspect not to move.

Instead the man lunged at him, going for his gun instead of the boys'. The officer fired as he tried to move away. Extremely well trained by the Sacramento County Sheriff's Department's elite staff, he was able to index the weapon as he fired, and even remembered "catching the link" of the sear mechanism as he delivered a stream of accurate fire. Every shot hit the man in the upper body. At last, the crazed man stopped, bending over with his hands on his knees like someone very tired, and breathing hard. He rocked back into a sitting position as if catching his breath, then went supine, and then lost consciousness. He did not awaken. It had taken seven solid hits from the .380 to stop him, and then not spectacularly.

All three incidents were ruled justifiable homicide. None went to trial in criminal court. The deputy in the last case was sued. I know this because I spoke for him at trial as an expert witness. I am happy to report that the jury came back with a total defense verdict, completely exonerating the deputy and his department. Today, retired from police work because of his injury and licensed to carry a gun, he wears his P220 .45 in a concealment holster and uses the .380 only for backup.



***At 25 yards, the P232 easily keeps five high-tech .380 Remington Golden Sabers in a palm-size group. The best 3shots are under 2inches.***



***Note the location of this strategically placed Band-Aid®, to protect the thumb joint from “Walther bite” from the edge of slide during firing.***

The only one-shot stop in the bunch was delivered by the female officer's brain shot. The two incidents in which the offenders were shot in the body with .380 hollow-points demonstrated what can only be called a disappointing level of stopping power.

Now you understand why I've been known to stand up in class with two SIG pistols. Raising my P220 .45 I would say, "This is your brain." Raising my P230 .380 I would add, "This is your brain on drugs. Any questions?"

## **Idiosyncrasies**

My other concern with the SIG .380 is that it doesn't quite live up to the reliability standards of its larger siblings in the SIG-Sauer family. While its fire control mechanism is pure SIG-Sauer, its operating mechanism appears to owe more to the Walther PP/PPK design of the late 1920s. This has certain advantages, notably the fixed barrel that is probably responsible for the splendid accuracy delivered by SIG and Walther .380s alike. However, both mechanisms also seem to experience more feeding malfunctions than you ever see with the larger SIG-Sauer combat pistols. Tightly fitted guns, these .380s have a tendency to choke on dirt. As noted in the maintenance chapter, these small pistols don't go long distances of hot and dirty firearms training as do the big SIGs. You probably want to disassemble, clean, and

lubricate them every 200 rounds or so. Even Trish, the sharpshooting young lady with whom this chapter opened, experienced malfunctions with her P232 toward the end of the course when dirt built up in the little pistol. A field strip, cleaning, and re-lubrication put her gun right again, but it's something the shooter simply has to keep in mind.



***The author does not find the .380s as reliable as the larger SIGs. The hull from the last round has failed to clear the ejection port and ended up backwards atop magazine follower.***

On rare occasions I've seen a P230 that was simply a jam-omatic, even if it was clean. Each time, I advised the student to send the gun back to SIG and each time the company chose to replace the pistol at no cost with one that worked, rather than repair the problem gun.

I understand why so many people love the SIG .380. It fits the hand well, right until the shooting starts and the slide starts biting the hand. It is luxuriously flat, and therefore both easy and comfortable to conceal. However, we have to remember that the ultimate purpose of a defensive handgun is to get you through a gunfight, and here, *any* .380 can be wanting.

***A European-style magazine release has been a hallmark of all the SIG .380s.***



Personally, I think a SIG P239, in any of that reliable little gun's three more powerful calibers, will far better protect you. "Friends don't let friends carry mouse guns." End of editorial.

If you choose to carry a .380, the SIG is a good choice. Keep it clean. Train intensively; you will need surgically precise shot placement to turn off an aggressive attacker with this marginal ammunition. Fortunately, as noted above, the P230 and P232 are accurate as .380 pistols go, though neither is likely to produce the gilt-edged accuracy of, say, a P220 or a P226.

### ***References***

1. (1) Schwing, Ned, "2003 Standard Catalog of Firearms," Iola, WI: Krause Publications, 2002, P.960.

## Chapter 7



### *The SIG P239*



**S**mith & Wesson’s development of the Model 3913 traditional double-action pistol in the late 1980s – a flat, compact nine-shot 9mm single-stack concealment gun – carved a new niche in the firearms market. A disproportionate number of gun experts chose it for personal carry, particularly in warm climates where a discreet profile was critical for an all-day “packing pistol.”

It was endorsed by three of our top female instructors, all slim women who appreciated its attributes: Lyn Bates, Gila May-Hayes, and Paxton Quigley. Big John Taffin, a man famous for his erudition in the world of large, powerful six-shooters, chose the double-action-only version of this flat little 9mm, S&W's Model 3953, as the pistol to tuck into his waistband when he went into town in the warm weather. At a gun writers' conference in humid Florida, I found myself at a table with two respected colleagues, Walt Rauch and Frank James. As conversation progressed, we discovered something interesting: all of us were licensed to carry in the Sunshine State, and all three of us were wearing Smith & Wesson Model 3913s as we sat talking to one another in that tropical environment.

The success of this slick little S&W pistol was not lost on SIGARMS, who set about duplicating the concept with their own twist, knowing they'd have to improve on the Smith to displace it in the market. They worked long and hard, and the result, introduced in 1996, was the SIG P239.



***In this petite female shooter's hands, a 9mm P239 proves to be the perfect self-defense handgun.***

In an absolutely brilliant marketing stroke, the P239 was marketed as the "personal-size" SIG. The ill-advised Clinton Crime Bill had passed a couple of years before, and the P228 and similar pistols were now necessarily sold with 10-round magazines instead of the 13-round magazines for which they had been designed. The market had responded: If people were going to buy small 9mm pistols of limited cartridge capacity, they wanted them

proportionally smaller than before so as to at least get *something* out of the bad bargain. The flat, single-stack P239, sized perfectly to its cartridge capacity, appealed naturally to this reasonable thinking.



***Retired police supervisor and SWAT cop Steve Denney is about to squeeze off a shot from his P239...***



***The .40 S&W may be the most popular chambering for the P239, and most certainly an effective one. This specimen wears Hogue grips.***

## **P239 Attributes**

The P239 came to a marketing table absolutely dominated by Smith & Wesson's Model 3913. What it brought to that table were two attributes: Superior accuracy and more powerful caliber options.

The Model 3913 was available only in 9mm Parabellum. Wayne Novak, the famous pistolsmith, managed to chamber two 3913s for the .40 S&W cartridge and make them work. He kept one, and the other is in the hands of my friend and colleague Charlie Petty. The work had been so difficult that

Wayne didn't think it could affordably be made available to the general public, and he never commercially offered the conversion. S&W did have a compact single-stack .40, but it was their Model 4013 on the .45 caliber Model 4516 frame, distinctly larger and thicker than either the 3913 or the P239. In the P239, the market now had a comparable size package to the 3913, not just in 9mm, but in .40 S&W and in .357 SIG.



*...and with his strong stance he easily manages the recoil of a full power .357 SIG round, seen exiting the chamber of the pistol.*



*Author thinks the desire to carry on-safe is the best reason to choose the S&W3913 over the SIG P239; otherwise, the SIG's slightly greater*



***accuracy and ease of decocking makes it the choice in a compact “slim-nine.”***

And, finally, there was accuracy. In the bigger market battle already ongoing – that of the full-size, high-capacity 9mm service pistol – it had become clear that the SIG P226 and the Beretta 92 were demonstrably more accurate than the Smith & Wesson 5906 and the Ruger P89. Ruger never did enter the compact single-stack 9mm market, and Beretta’s entry, the Model 92 Compact, was never as short or as flat as the 3913 or the P239, leaving the SIG and Smith marques to do battle for that lucrative corner of firearms sales.

I had always appreciated the good accuracy of the 3913. It was one of those rare cases where the shorter gun was more accurate than the long one; the 3913 was invariably more accurate than its big brother, the 5906. The latter gun would do 3 inches to 4 inches at 25 yards in most examples (though the expensive Performance Center semi-custom version that came later could crack an inch), but the 3913 would typically group five shots in about 2-1/2 inches at the same distance.



***The 9mm P239 competes directly with this successful carry pistol, the Smith & Wesson Model 3913.***

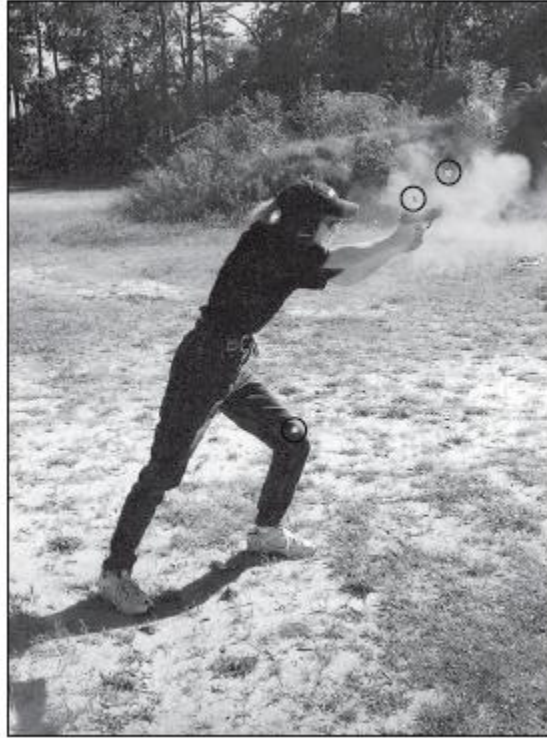
The P239 9mm could beat that. Not by a lot, but it could beat it.

Thus, the customer looking for a high-quality, totally reliable double-action 9mm concealed carry pistol with a flat profile, and satisfied with a 9-shot cartridge capacity with the gun fully loaded, now had a choice. Before, they'd had only the 3913; now they had the P239 on the table, too.

In 9mm, the choice was simple. Both had good actions, good trigger pulls, superb reliability. If you preferred a pistol you could carry on-safe, you would buy the Model 3913, whose slide-mounted lever functioned as both a decocker and a manual safety. If you preferred to carry without a manual safety engaged, the P239 was the more logical choice. Not only was its frame-mounted decocker more accessible to most shooters, but the SIG could not accidentally be put on-safe by an overhand slide manipulation, as could the S&W. If accuracy was your determining factor, the SIG would win the contest by a small margin.

But, there was also that matter of power.

At the price of one cartridge in magazine capacity, you could get the P239 in .40 S&W or .357 SIG. Not until 2003 would Smith & Wesson offer the Model 3913's slim-line format in the .40 caliber, announced at a gun writers' conference S&W hosted in Springfield, Mass. in January of that year. Not until the fourth quarter of that year would S&W sort out the magazine problems and actually start shipping the gun they called the Model 4040. While they considered chambering it for .357 SIG, that has not yet been done at this writing.



***Weighing barely 100 pounds, Tara Miller hammers five rounds of the most powerful .40 S&W ammo through her SIG P239 in one second, still maintaining recoil control. Note one spent casing airborne above gun, another behind it, and one more passing forward of her knee.***

For many, the greater power of the .40 S&W or the .357 SIG over the 9mm is the deciding factor. One must be careful with this decision, however. A properly selected 9mm round can be more potent than some .40 cartridges. The 115-grain 9mm in the +P or +P+ velocity range can do more damage than a 180-grain subsonic .40 bullet. On the other hand, a Pro-Load +P 135-grain .40 JHP traveling at 1300 feet per second can cause more damage than a 115-grain 9mm JHP at the same velocity. And a 125-grain .357 SIG bullet at 1350 or more feet per second can be reasonably expected to do a little more damage than either of the others.

## **Hand Fit**

The P239 has the shortest trigger reach of any double-action SIG. This makes it particularly suitable for the hands of petite women and anyone else

with short fingers. Interestingly, this is the one pistol SIGARMS produces with the short-reach trigger as standard. On other models, the longer-reach trigger is the standard part unless the pistol is special ordered.

Some shooters with longer fingers actually find the short-reach trigger *too* short. No problem. The longer or shorter trigger can be retrofitted to these guns by a SIG armorer or by the factory if you wish to send it back. Armorer Rick Devoid notes that one of the most popular modifications he does on SIG pistols is the installation of the shorter reach trigger. However, he also does a land office business installing the longer-reach triggers on P239s that belong to shooters with large hands!

## **P239 versus P225**

The P239 essentially supplanted the P225 in the SIG line-up. It was slightly lighter, 25 ounces to the P225's 26.1 ounces. It was distinctly smaller: the P225 is 7.1 inches long with a 3.86-inch barrel; the P239 is 6.6 inches long with a 3.6-inch barrel. In height, topstrap to butt, it measured virtually the same with the magazine in place. While the frame was shorter in this dimension on the P239 compared to the P225, the new gun had a flanged plastic buffer on the floorplate of the magazine, which gave the little finger something to hang onto. It also increased the height dimension to about the same as a P225 with its flat-bottomed magazine inserted. Recoil difference was virtually indistinguishable when the same 9mm ammo was fired in each gun.



*With fifth hit in the white at 12 o'clock, this P239 has centered a nice group at 25 yards with Winchester's police-only Ranger .357 SIG ammo.*



*Jim McLoud finds the recoil of the SIG P239 controllable in caliber .40 S&W.*

For those who carried the hottest 9mm self-defense ammunition, the P239 had another big advantage over its older brother, the P225. I've heard numerous reports of P225s failing with hot 115-grain/1300+ fps 9mm ammunition when the powerful loads cycled the slide so fast that it couldn't pick up the next round on the single stack of cartridges, and closed on an empty chamber instead of a live round. I have never either seen or heard of such an occurrence with a P239 9mm pistol.

And, of course, there is the availability of the .40 S&W and .357 SIG caliber options with the P239, which never existed with the P225. As an added bonus, the P239 in calibers .40 or .357 is interchangeable; that is, you can put a .357 SIG barrel in your .40 or a .40 S&W barrel in your .357 SIG without changing anything else. Neither caliber will interchange with 9mm.

One who felt the P239 was a huge improvement over the P225 was Duane Thomas. Published in *Gun World* magazine, his article “Choosing a Compact Carry Pistol” was subtitled “Why this author thinks the SIG P239 is the best bet for most people.”



***Tucked away in a good inside-the-waistband holster, the P239 is a concealable package even for the very slender woman wearing it here.***



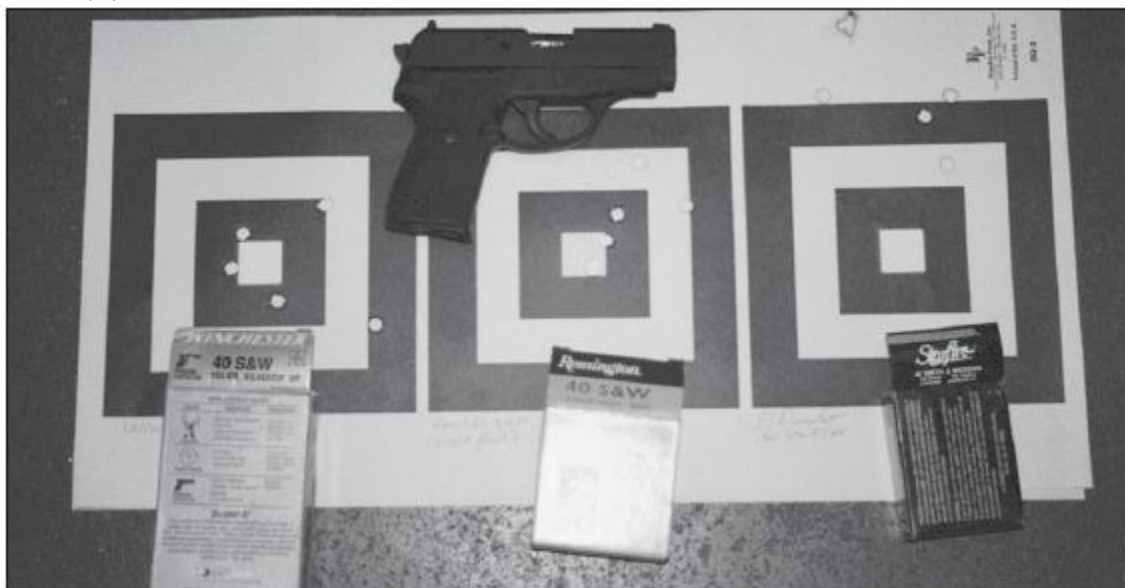
***Two groups at 25 yards with .40 caliber P239, measuring about 1-1/2 inches, top, and 1-1/8 inches, below. Ammo is Black Hills with 180-grain Gold Dot bullet.***

Duane had this to say, among other things, about the P239 vis-à-vis its predecessor gun. “SIG can make the slide on a P239 shorter and narrower than a P225’s and still have a functional gun because on a P239 that part is actually a solid, machined piece of stainless steel versus the hollow stamping with pinned-in-place breech block of the P225. Even though the P239’s slide is smaller than the P225’s, it weighs about the same, therefore slowing slide velocity to allow good cycle reliability. This also ensures the piece doesn’t beat itself to death in short order as tends to happen on guns with really high-speed slide strokes.” ([1](#))

Thomas also wrote, “Speaking of reliability, in my experience I’d have to rate the P239 higher than the P225 in this critical area. I’ve owned two P225s and at one time was very impressed with this gun. That positive impression has waned as I’ve gained more experience with it. Both my P225s experienced serious functional problems as time went on. While attending and competing in numerous combat pistol matches, I’ve been able to watch several other people firing their P225s. I have yet to see anyone



who was not having serious feed reliability problems with this gun. According to one competitor who had researched this matter thoroughly with the SIG warranty repair department while dealing with his own P225 woes, the problem is traceable to the P225s magazine feed lips. Only a minute spreading of the lips under hard use is required to cause rounds in the mag to simply not feed. Happened to me, happened to him, happened to another hapless P225er I watched struggling with his gun at a match. On the other hand I don't know anyone who's ever had a problem with a 9mm P239." (2)



***This P239 gave “service pistol quality” groups at 25 yards with these popular .40 S&W carry loads.***

The P225 jams that Duane Thomas describes are something I have not seen personally. However, I have had the same observation as he concerning the P239: total reliability, no breakage.

In any case, the P239 has well and truly replaced the P225 in the hearts, minds, and holsters of most SIG shooters. I used to see quite a few P225s at our LFI-I classes, where students tend to show up with their concealed carry guns. This past year, I kept count, and exactly *one* student brought a P225. It functioned perfectly and he had no problems with it. However, I lost count early on of the number who came to class with SIG P239s in the various calibers.





*Three variations on a theme include P239 pistols in, top to bottom, 9mm Parabellum, .40 S&W, .357 SIG. Identical in most dimensions, though the slide of the 9mm is very slightly lighter. The .357 and .40 can interchange calibers with replacement barrels, but neither is interchangeable with 9mm.*

## **P239 Accuracy**

This “personal-size gun” delivers full-size accuracy. The S&W Model 3913 that was often my “summer pistol” for concealed carry would reliably shoot five 9mm bullets into 2-1/2 inches at 25 yards, and the P239 I tested when the new SIG came out shot better. I couldn’t find the original article I wrote on the 9mm P239, and so default to Duane Thomas’ story on the same make and model in the February, 2002 edition of *Gun World* magazine.

Duane has taken a couple of LFI classes with me, and I've shot a couple of matches with him. I know him and I know the pistol in question – both are very good – so I was not surprised with the results.



***Five shots in 1-1/8 inches at 25 yards with P239 .40 and Black Hills ammo. The heart-shaped hole with three shots measures 3/8 inches center to center.***



***In .357 SIG, the P239 gives ample power in a small yet manageable package.***

Thomas tested his SIG P239 9mm on an indoor range with only 50 feet of distance available, not the usual 75 feet (25 yards). He reported, "Best groups were evinced by Federal's famously accurate 115-grain 9BP with a group of 1 inch even, darn near perfectly regulated for windage and elevation, with three of the five rounds in one hole in the X-ring. But slightly larger was the 1-1/16-inch thrown by the Hornady 124-grain XTPs. Marginally larger again were the Winchester 115-grain Silvertips at 1-1/8 inches. Several loads put four rounds into exceptional groups with a fifth opening up overall group size somewhat...The Speer 115-grain Gold Dots put four rounds into a tight 7/8-inch group, with a fifth shot increasing the overall group to 1-11/16 inches. Another Gold Dot, the 147-grainer, put four rounds into 1-1/16 inches, a fifth coming in at 2-1/4 inches.

And the Wolf hardball put four rounds into a nice, tight 1-inch cluster with a fifth hole, alas, at 2-1/4 inches." (3) Adding half again the distance, Duane's fifty-foot groups would extrapolate to an inch and a half to two

inches with most of those loads at 25 yards. This is about the performance I recall with my own test sample of the P239 in 9mm.

The 9mm is not the only accurate P239. For the purpose of this book, the following test was done in November 2003 at the Manchester Indoor Firing Line in Manchester, New Hampshire from the 25-yard bench. The pistols were heavily shot range rental guns, P239s chambered for .357 SIG and .40 S&W.

The P239 was aptly named the “personal-size” model by the SIGARMS people. It is extremely discreet and comfortable to carry. Recoil is trifling in 9mm, certainly manageable in .40 S&W, and not even that much of a challenge in .357 SIG. Its extreme popularity is well deserved.

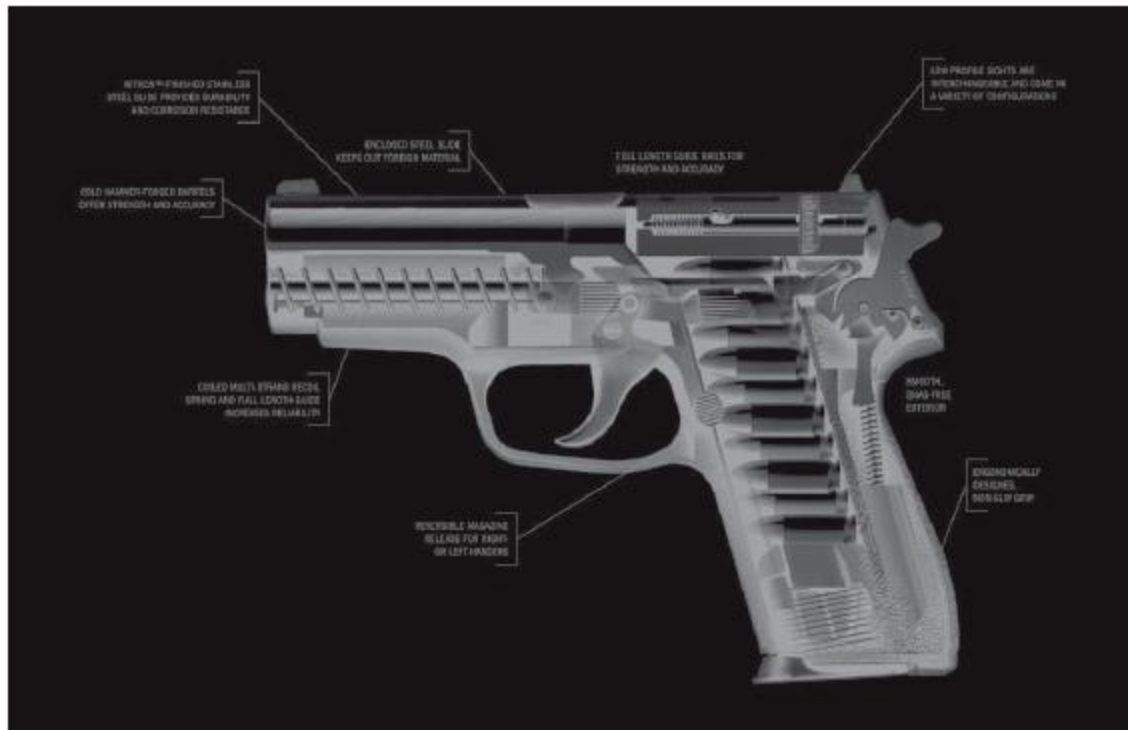
### **References**

1. Thomas, Duane “Choosing a Compact Carry Pistol, *Gun World* magazine, February 2002, P.53 P.58-59.
2. *Ibid.*,P.54.
3. *Ibid.*,P.58-59.

SIG P239 .357 SIG			
Brand	Bullet	5-Shot Group	Best 3 Shots
Black Hills	125-grain JHP	4 inches	3 3/8 inches
CCI Speer Gold Dot	125-grain JHP	3-1/16 inches	1 7/16 inches
Federal Classic	125-grain JHP	3 inches	1-1/16 inches
PMC	125-grain FMJ	5-13/16 inches	15/16 inches
Winchester Ranger	125-grain JHP	2-1/2 inches	1 inch
SIG P239 .40 S&W			
Brand	Bullet	5-Shot Group	Best 3 Shots
Black Hills	180-grain JHP	1-1/8 inches	3/8 inches
PMC El Dorado Starfire	180-grain JHP	4-1/8 inches	1-11/16 inches
Remington	180-grain JHP	2-11/16 inches	1-3/8 inches
Winchester Silvertip	155-grain JHP	3-13/16 inches	1-13/16 inches

No, the top line on the P239 .40 is not a misprint. Five rounds of Black Hills’ match-grade ammo, with 180-grain Gold Dot bullets, in an inch and one eighth at 25 yards, with the best three in a cloverleaf cluster measuring three-eighths of one inch center-to-center for the farthest holes. Thinking it was a fluke, we tried again and got a hair over an inch and a half for five, with the best three in thirteen-

sixteenths of one inch. A little pocket gun, in what most consider the least accurate of the three calibers for which it is chambered, had exhibited outstanding accuracy potential.



## Chapter 8



### *The SIG P245*



## AT LAST: A SIG .45 COMPACT

ans of the P220 .45 auto had long clamored for a compact version, a pistol that would be to the P220 as Colt's Officers ACP and Defender compacts

---

**F**were to the classic Colt Commander. SIGARMS answered that request in 1999.

I wrote what may have been the first published test on the new pistol, for *Guns* magazine. Since that time, SIGARMS has come up with a new incarnation of the eight-shot P220 magazine that does not have the problems I mentioned in 1999 that can be found in the earlier DPS magazine. They also have an attachment to make the longer .45 magazine fit better in the shorter-framed P245. A P245 may now be ordered with XS sights, the old “fast and close” Ashley Express concept. Other than that, nothing about the P245 has changed, and the 1999 article is reprinted below, with updated photos.

In double-action combat autos, one of the pistols to beat has always been the SIG-Sauer, imported into the United States by SIGARMS. Their P220 .45 auto has been around for more than 20 years. It debuted in this country as the Browning BDA, and when adopted by the Huntington Beach, California Police Department, it opened the U.S. police market to .45 automatics. Police executives of the period were still embroiled in ACLU hollow-point bullet controversies, still subject to a media that bitched at them for wanting “.45 caliber horse pistols” instead of traditional “.38 Police Specials,” and were avoiding at all costs anything as militaristic as adopting what was then still the official U.S. armed services sidearm, the Colt 1911. Besides, a “cocked and locked” pistol gave non-gun-oriented police chiefs the heebie-jeebies, and still does.

The P220 won an enviable reputation for reliability, accuracy, and safety in service. It was one of the first .45 automatics approved by the FBI. More than one state police agency adopted it. The overall shape and aluminum alloy frame made it roughly equivalent in size and bulk to the lightweight Colt Commander in the same caliber. It was easy to carry and easy to shoot well.

The SIG’s trigger pull, in both double- and single-action, became the standard of the double-action auto pistol industry. It was a superbly accurate weapon, outshooting every double-action .45 auto but the Ruger P-90, and even that gun, while equalling the P220, did not exceed it for accuracy. The P220’s almost straight-line feed angle let it feed hollow-points at a time

when the paradigm .45 auto, the 1911, needed to be customized to feed any hollow-point but the Remington.

Suffice to say the P220 made a lot of friends in both the police sector and the private citizen market in the United States. I was one of them. I make my home in a part of the country whose winters make it a frozen wasteland and where for about four weeks annually, wind-chill factors in the “30 degrees below zero” range are not unheard of. I discovered that the butt-heel release of the European-style P220 made it work better in a heavily gloved hand than anything else. It became my pet carry gun for deep cold weather.

We of the unofficial “SIG P220 .45 Fan Club” had but one request, and it was one the SIG folks heard ad nauseam. “We love the gun...but when are you going to make it just a little bit smaller?”



***P245 proved itself in cold-weather handling, and presents a significantly smaller size package than SIG’s standard .45.***

SIG heard. SIG listened. SIG quietly went to work on it. And, just when we least expected it, SIG responded to our pleading with a pistol they call the P245.



## Quiet Introduction

I would like to tell you that SIG appreciated me being a longtime fan and sent me the first test gun for that reason. I would like to tell you that, since I live less than an hour's drive from the SIGARMS plant in Exeter, New Hampshire, my keen "trained investigator" instincts allowed me to smell it out before anyone else. I would like to tell you that and more, but I can't, because it would all be a crock of crap. Let me tell you what, as near as we can figure out, really happened.

*With the six-round magazine inserted and the seventh round in chamber, this P245 is backed up by a current 8-round P220 magazine with an adapter... →*



The first shipment of guns came into the country. Somebody slipped somewhere at SIGARMS, and at least one shipment was sent out to a certain distributor who was backordered on the ever-popular full-size SIG .45. One such pistol found it's way to a San Diego gunshop. Cameron Hopkins, this publication's executive editor, walked into that shop and saw what appeared to be a shrunken P220 American (the P220 with the Yank-preferred side button magazine release) in the showcase. Hopkins went into high gear: one gun to Ichiro Nagata for his incomparable photography, one to me some 3,000 miles away by Federal Express, and, oh yes, there was

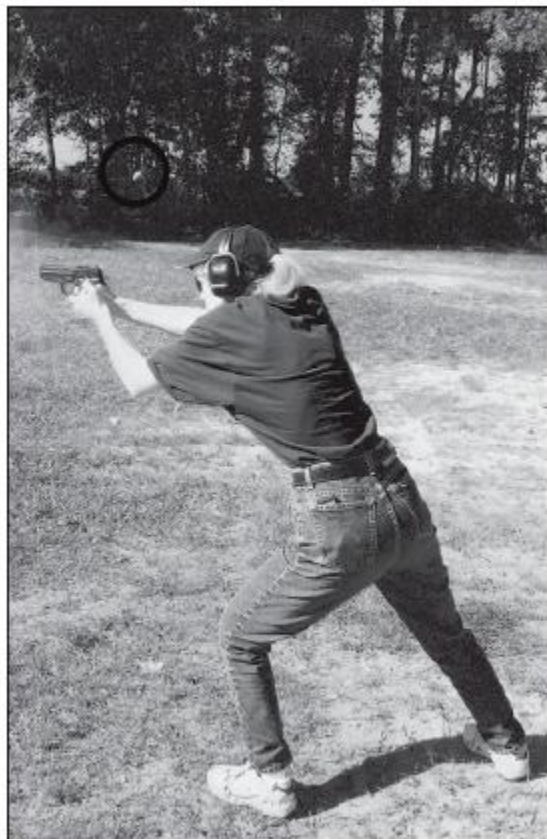
the matter of the deadline. “Yeah, Merry Christmas, yada yada, I need you to shoot hell out of this gun now!”

## Surprising Accuracy

So there I was, two days after Christmas, on a range that wasn't sub-zero yet but was damn sure sub-freezing, accuracy testing the P245. It was braced on a bench while I was down on both knees 25 yards from a backstop sufficiently frozen that at each shot, it sprayed particles of frozen dirt 75 feet back in protest. (Actually, this was a good thing. It showed that when the bullet hits the backstop some meaningful displacement of matter takes place. This is why one chooses a .45 caliber pistol in the first place.)



*... that looks like this when inserted in the more compact gun. Going from seven to nine shots and gaining a better grasp makes sense when the P245 goes from carry gun to home defense gun, and for street reloads.*



***Tiny Tara Miller demonstrates control of P245 lightweight compact with full power G.I. .45 hardball. Her whole 100 pounds or so is “into” the gun (note tautly flexed knee of rear drive leg), even with a spent casing at 1 o’clock above the gun, the muzzle still on the target.***

As you peruse the group sizes, bear in mind that the shooter was an aging, arthritic male descended from an anthropological background that is not genetically programmed to thrive in sub-freezing temperatures. His arthritic knees were in direct contact with frozen ground surface. He was not at his best. Read in a whimper if you wish.

Five shots were fired with each of six popular .45 ACP defense loads. Two measurements were then taken, each center-to-center in the bullet holes: the dispersal of all five shots, and the dispersal of the tightest three of those hits. The five-shot group gives you a prediction of what you can do if you keep your cool and are shooting from cover over a stone wall or something 25 paces from the threat. The three-shot group gives a pretty good idea of the inherent accuracy of the pistol/load combination. By taking

the best three, you factor out two things: ever-present human error, and the fact that the first hand-cycled cartridge is usually in a very subtly different “battery” vis-à-vis how the parts wind up aligned after automatically cycling subsequent to a previous shot. This is why it is so common to see the first shot of the group hit a little away from where the subsequent shots go when accuracy-testing a semiautomatic pistol.

Results were as follows, with a shivering shooter firing at 25 yards with gloved hands, and all the rest of the cheap excuses:

The accuracy results are listed in alphabetical order. By the time I shot the last group, the Speer 200-grain, I was palpably shivering. An almost 4-1/2-inch group should be held against me, not the gun, but the significant thing is that the best three shots from that particular cluster measured seven-eighths of one inch center to center from 25 yards.

<u>Manufacturer</u>	<u>Load</u>	<u>5-shot group</u>	<u>Best 3 shots</u>
Federal Classic	185-grain JHP	2-1/16 inches	1-3/8 inches
Pro-Load	230-grain FMJ	2-3/8 inches	1-1/8 inches
Pro-Load	185-grain JHP	3 inches	1-7/16 inches
Speer Gold Dot	200-grain JHP	4-7/16 inches	7/8 inches
Winchester Silvertip	185-grain JHP	2.5 inches	1 7/8 inches
Winchester	230-grain JHP	3-5/8 inches	1-5/8-inches

Suffice to say that under the circumstances, the P245 delivered superb accuracy. None of the ammunition used was “match-grade,” no robot machine rest was involved, and the tester (me) was an aging feeb who was shivering from the cold for at least part of the shooting protocols. Anything unimpressive here, speaks to the shooter. What is impressive speaks to the pistol.

In past years, I have noted the following. 1) No double-action pistol exceeds the SIG for accuracy in .45ACP, and damn few even equal it. 2) Frankly, damn few custom 1911 .45s equal or exceed the SIG either. 3) The SIG P220 is the one service pistol that in my experience will not be made more accurate by installing a BarSto barrel. All I found was that my own old SIG with its factory barrel and a new P220 American would both do 7/8 inches with Federal Classic 185-grain JHP at 25 yards, and the BarSto would equal but not exceed that. And it might be as accurate with one or

two more additional factory .45 combat loads, such as the Federal Hydra-Shok, which normally won't do under an inch in a factory SIG like it will in a BarSto 1911 barrel.

Let's stop here, and simply say that the P245 passed the accuracy test with flying colors.

## Shootability

Call it "ergonomics." Call it "human engineering." Call it "user-friendliness," or just call it "shootability" in shorthand. Whatever. The SIG P245 not only has it, but has it nailed down.

Take it out of the sleek new "double-lockable" box it's shipped in. Triple-check it unloaded, close your eyes, and run your hands over it. There are no sharp edges that will bite your hands while shooting. The stippling on the plastic grips gives you a sense of "permanent skateboard tape." However, it doesn't snag on fabric and lift the concealing garment when you carry the pistol hidden behind your hip.

It has big, blocky sights that even us old blind guys can see. The test pistol didn't have tritium night sight inserts but instead, the familiar SIG "von Stavenhagen pattern" of a white bar at the rear and a white dot up front, a dot the "i" kind of thing. I found it to work well shooting a qualification with the sun in my eyes on a cold winter day.

Shooting a qualification in front of somebody is a good way to test the human engineering of a pistol. No, "you ain't bein' shot at or nothin'," but there are elements of peer pressure and performance anxiety that create a microcosm of stress and some degree of "body alarm reaction." I remember shooting the first Bianchi Cup in 1979 with Jim Cirillo, the multiple shootout survivor of the famed NYPD Stakeout Squad, who told me then, "I never felt this much stress in any of my (expletive deleted) gunfights!"



*Professional pistol packers like the no-nonsense look and non-reflective finish of the SIG P245.*

### **Qualifying with the P245**

**Scene circumstance:** Freezing, no gloves, sun in eyes. Psychological circumstance: It's Christmas weekend, for goodness sake, just want to get home and be with the kids before the oldest has to go back to school. Target: IPSC Brussels, with a 6-inch by 11-inch five-point zone that's a helluva lot tighter than the maximum five-point zone on an old FBI Colt silhouette, a new FBI "Q" silhouette, or the ever-popular NRA Police Qualifier B-27 silhouette. Course of fire: easy "off duty gun" course, 60 shots, times like 12 shots in 25 seconds from 7 yards.

**Score:** 60 Pro-Load 230-grain hardball and Winchester Silvertip 185-grain JHP in a centered group measuring 6-5/8 inches vertical by 4 inches horizontal. A total score of 299 out of 300. It should have been a perfect

300 but I was holding too high in “five zone.” Shooter’s fault, not gun’s fault.

**Points noted in qualification:** If you shoot with the “high thumbs” position, a right-handed shooter’s thumb rides the slide lock lever and the pistol won’t lock open with empty. SIG-Sauer shooters have known this for 22 years. Get over it or shoot with thumbs curled down, which there’s no reason not to do with the SIG pistol. The magazine release button needs a forcible stab to release. This is a good thing for those of us who carry these guns in cold weather. It won’t accidentally release in the two-hand grasp of a right-handed shooter, especially when wearing gloves, like the older “American style” SIG pistols did. During reloading the magazine insertion needs to be forcible to get past the “sticking point” felt when reloading in slow motion. Duh. Who reloads in slow motion anyway? Not a problem of the gun, a problem of the shooter. Reload forcibly. Get over it. The trigger pull is consistent, clean, around 4.5 pounds in single-action and perhaps 12 to 13 pounds in double. There is a slight creep (palpable sense of trigger moving internal parts). But this is “good creep” rather than “bad creep,” in that it gives you a sense of when the gun is about to go off but does not have friction or drag points that pull the sights off target as the shot is about to be unleashed. The trigger reach could be a little shorter in the double-action mode, but is ideal for my “average adult male hand” in single-action. With a bare hand, the magazine extension makes the pistol fit my hand almost perfectly. With a glove on, the added bulk and thickness of my fingers is enough that it’s a “two finger grasp” gun, with my little finger curled under the butt. Overall, this is not really a problem. The full size SIG for me is also an excellent fit in the gripframe bare handed, but with gloves the little finger hits the magazine lip about halfway, and I generally wind up shooting with the little finger curled underneath anyway when wearing snowmobile gloves.

**Overall impression:** This is a good little .45 auto.

## Reliability

The test of a .45 auto is, “will it feed the ‘flying ashtray’?” This is what my friend Dean Grennell christened the 200-grain CCI-Speer hollow-point

.45 ACP. The P245 fed it without a bobble, spitting three Gold Dot versions of that long-proven manstopper into seven-eighths of an inch, center-to-center, at 25 yards from a two-handed rest with gloves on. This wide-mouth “CCI trademark profile” bullet has put a lot of bad guys out of commission in actual shootings. I recall one slaughterhouse test in which several animals were killed with exotic 230-grain hollow-point .45 bullets like the Black Talon, the Hydra-Shok, and the extremely impressive StarFire. Then, almost as an afterthought, we did a steer with the load I was carrying in my issue 4-1/4-inch Ruger .45 auto, a 200-grain CCI “flying ashtray” loaded to 1,050 feet per second. The huge animal died instantly, its brain so devastated by intracranial pressure that the animal’s eyes were bulged out of their sockets. The bullet had virtually 100 percent weight retention, and mushroomed to about an inch in diameter, which is something you don’t often see.

The SIG P245 fed the “flying ashtray” without a hitch. It fed everything. The one malfunction experienced in several hundred rounds was a failure to eject with a 230-grain ball round, during accuracy testing where the shooter was firing with a relaxed grip and the shot in question was the final round in the gun. Simply reloading and jacking the slide cleared the weapon and brought it back up and running.

## **Wearing The P245**

New guns need new holsters. I tried several of mine, and the bottom line was, the P245 worked best out of a P220 holster. There will soon be numerous holsters made to fit this truncated P220.

Depending upon where you take your rearmost measurement from, the P245 is somewhere between half an inch and three quarters of an inch shorter than the P220. Unless you’re wearing the wrong kind of holster in the wrong place, this won’t matter much in terms of concealment.

Where the reduced dimensions of the P245 do matter in terms of concealment is in that often-misunderstood measurement called “height.” Measured from the butt of the pistol to the top of the slide, this is the dimension that really matters when you carry the gun at your waist, and it’s here that the P245 is distinctly shorter than its parent P220. The price you



pay for that is “one round down.” Yeah, I know, SIG created the “DPS” magazine for the Texas Department of Safety after they adopted the P220, and thus created the “eight-plus-one-shot SIG .45.” Guys who have them show them to me as if they were revealing icons, since the eight-shot SIG .45 mag is rarely seen outside police departments.

Let’s get real here. The compact SIG .45 holds six rounds in its magazine and a seventh in its firing chamber. The typical P220 you’re likely to find will hold seven, plus one. I noticed that my one DPS eight-round magazine for the P220 “tightened the stack” so much with spring pressure that it took extra force for me to reload it into a SIG .45 whose slide was still forward on a live round, and I got to where, if I carried that magazine, I loaded it with only seven rounds just to make sure everything would work in an emergency.

So, you’ve got a .45 and you’re down from eight or nine rounds to seven. Is this really a problem? For most of this century, U.S. military men carried seven-shot .45 automatics – the 1911 pistol with the generally ordered carry condition of empty chamber, and seven-shot magazine in place – and were considered to be the best-armed soldiers on the planet who had been issued “pistols only.” These were men in combat zones. Should concealed carry of a seven-shot .45 that can fire its first shot instantly without having to work a slide be seen as a handicap in civilian, stateside America? I for one don’t really think that’s a problem.

## Bottom Line

I found the SIG P245 comfortable and concealable to carry, quick and easy to shoot, and more accurate than most would dare to have hoped.

SIG has a history of not being the first to jump on the bandwagon. They were the last of the big police pistol purveyors to come on line with a .40 S&W caliber handgun, because they waited until they had it down pat with total reliability. They waited to jump into the “plastic pistol market” longer than the rest, until their polymer-framed ***sig pro*** was totally debugged and ready to pass the torture tests, as it just did for the Drug Enforcement Administration a few months after this magazine gave it a clean bill of health.

SIG did the same with its compact P245. Unlike manufacturers who call press conferences about guns they haven't got working yet, SIG kept the long-demanded compact .45 under wraps until they were coming off the production line working 100 percent. They'd have kept it under wraps longer and gotten more feedback if Hopkins hadn't picked up on the P245 and "outed" it.

The bottom line is, the long-awaited compact SIG P220 .45 is here...it works...it has the fine accuracy and excellent reliability of its street-proven parent product... and it was worth the wait. They call it the "P245," and if you feel the traditional SIG double-action pistol concept and the .45 ACP cartridge coincide with your concealed handgun needs, you really should check it out.

<b>For Comparison</b>		
	<b>P245</b>	<b>P220</b>
Overall length	7.28"	7.8"
Overall height	5.0"	5.6"
Unloaded weight	27.5 oz.	27.8 oz.
Width	1.34"	1.4"
Barrel length	3.9"	4.4"
Sight radius	5.7"	6.3"
Cartridge capacity	6 + 1	7 + 1
Caliber	.45 ACP	.45 ACP
Available as DAO?	Yes	Yes

## Chapter 9



### *The sig prro*



**I**n June of 1998, I attended the conference at which SIGARMS' new *sig pro* pistol (a.k.a. SP2340) made its debut to the firearms press. As the speakers explained the gun, my forearm touched the I SIG P226 under my coat, and I wondered what the cheaper-looking new pistol would do that my reliable "old" pistol would not.

The answers were quick in coming.

It had a frame rail for light attachment, first seen on the HK USP. It had a polymer frame for light weight, recoil-absorbing flexion, and reduced cost, a concept popularized by the Glock. It offered a changeable grip size, a feature pioneered by Walther on their high-tech new service pistol that barely preceded the ***sig pro***. The flat-wire coiled springs were already proven by SIGARMS on the compact P239 they had introduced a couple of years earlier.

Our first test guns were in the most popular current police caliber, .40 S&W, with .357 SIG to follow and, possibly, a 9mm if demand warranted. Apparently it did. The ***sig pro*** in .357 SIG, also designated SP2340, was not long in coming, and thereafter SIG introduced the 9mm version, dubbed the SP2009. While a simple change of barrels would convert the SP2340 from .40 to .357 or from .357 to .40, the 9mm variation had no interchangeability potential due to the smaller case head of its cartridge. The .357 SIG and .40 S&W are identical in that respect.

These guns say “SIGARMS” on them, not SIG-Sauer. That said they have “SIG-Sauer” written all over them in other ways. The manual of arms is *exactly* the same as on the pistols SIGARMS began calling “the Classic line” upon the introduction of the ***sig pro***.



***A randomly selected .357 sig pro put five Federal JHPs into 2.5 inches, and five Gold Dots in under 3 inches at 25 yards.***



***They may look different, but the sig pro slide stop and decocking lever are in the same places and operate the same way as on “classic” SIGs.***

From the first, the ***sig pro*** proved to be an accurate pistol, particularly in the two more powerful calibers. I recently benched one of each from the 25-yard line of the Manchester, New Hampshire Indoor Firing Line, with the following results:

<u>Brand</u>	<u>Bullet</u>	<u>5-Shot Group</u>	<u>Best 3 Shots</u>
<b><i>sig pro</i> SP2009, 9mm Parabellum</b>			
Federal Classic	9BP 115-grain JHP	2-5/8 inches	2-1/2 inches
Remington +P	115-grain JHP	1-3/4 inches	1-3/16 inches
Winchester Subsonic	147-grain JHP	2-7/8 inches	1-1/2 inches
<b><i>sig pro</i> SP2340, .40 Smith &amp; Wesson</b>			
Black Hills	180-grain JHP	2-9/16 inches	1-3/8 inches
Remington	180-grain JHP	3-3/8 inches*	1-5/8 inches
Winchester Silvertip	155-grain JHP	4-1/16 inches**	1-1/4 inches
	* 4 of 5 shots in 1 7/8"	** 4 of 5 shots in 1 3/4"	
<b><i>sig pro</i> SP 2340, .357 SIG</b>			
CCI Speer Gold Dot	125-grain JHP	2-15/16 inches	1-3/16 inches
Federal Classic	125-grain JHP	2-1/2 inches	1-3/8 inches
Winchester Ranger	125-grain JHP	4-5/16 inches	2-7/16 inches

A lot of cops have bought ***sig pro*** pistols. Those who have them seem very pleased with them. Where I live, the state law enforcement academy has bought DAO SP2340s in .40 S&W for their armed personnel, and one of the most gun-wise chiefs in the state has bought ***sig pro*** .357s for all his troops. I'm told the DEA has approved the ***sig pro***. The Richmond, Virginia Police Department has these guns in .357 SIG, and they have worked out just splendidly.

"Will it stand up?" "Will it shoot like the SIGs we know?" These were the questions that were asked when the gun came out. They have been answered by time and extensive field experience: "Yes" and "Yes."

One unanswered question remains. If you look at the right side of a ***sig pro*** slide, at about 8 o'clock to the slide pin, you will see a shallow little hole that stops and goes nowhere. And you know, after all this time, I'm *still* trying to figure out what the hell it's for.

Witness the fact that J. P. Sauer & Sohn GmbH was in 2003 awarded what may be the largest contract for new service handguns signed since World War II. It was for ***sig pro*** pistols. It is a joint purchase by French agencies including the Ministry of Defense (Gendarmerie Nationale, Ministry of Interior (Police Nationale), and Ministry of Finance (Customs). The order calls for more than 200,000 ***sig pro*** pistols.

The background and rationale of the ***sig pro*** were fresher and closer to the source when, immediately after the 1998 introduction, I wrote an article on these guns that appeared in the 1999 "Complete Book of Handguns." It is reprinted immediately hereafter, with the original publisher's permission.

## **SIGARMS Goes Polymer**

### **This is not your father's SIGARMS pistol...**

In June of 1998, I was among a handful of industry professionals invited by SIGARMS to the debut of their newest handgun, the ***sig pro***. The event was concurrent with the National Rifle Association's annual meeting in Philadelphia. I think it's safe to say that all of us who enjoyed the hospitality of the hosting range were impressed.

First, some points on terminology. Why did a brand that went from “SIG-Sauer” to “SIGARMS” in all caps decide to use not only all lower case letters, but both *italicized* and boldface lower case letters for the name of their newest product? I’m not really the guy to ask. I figured at first it was just a Madison Avenue thing. No, we were told, it was simply an assurance that the market would see from the beginning that this was something really new from a company that hadn’t offered this type of pistol before. It was their way of saying, “this isn’t your father’s SIG-Sauer,” nor is it your grandfather’s SIG-Neuhausen.



*sig pro comes in 9mm...*



*40 S&W...*



*and .357 SIG.*

## **Old Quality, New Technology**

Seen as the top-quality, top-price BMW of service handguns, the conventional SIG pistols (known as the Classic models since the coming of the ***sig pro***) had priced themselves out of certain markets. This included many law enforcement agencies that bought on bid. It included the ordinary working stiff that Bill Clinton (but not, to their credit, SIGARMS) has been known to call “Joe Sixpack.” Believing, unlike Clinton, that rank-and-file law-abiding citizens have a right to fine quality defensive handguns, the decision-makers at SIG wanted a pistol they could sell one at a time, as well as bid a department at a time, for less.



A polymer frame was chosen for light weight and reduced cost of manufacture. Working on a clean sheet of blueprint, SIG designers were able to design in the best features of some of their competitors, and try for the occasional “first.”



***Interchangeable “grip shells” allow fit adjustment to hands of different sizes.***



***With Black Hills .40 ammo, SP2340 put five rounds in just over 2.5 inches at 25 yards.***

HK had, with the USP, been the first to mold rails on the front of the frame for flashlights and other attachments. They were followed by Walther (P99), Glock and, of course, the ***sig pro***. Wilcox Technologies were first out with the attachments, ranging from white light to laser to night vision-compatible infrared.

The above-mentioned Walther had interchangeable grips to allow for different hand sizes. So does the ***sig pro***.

The Glock has quick-change trigger options that let an armorer bring the gun from heavy DAO to ultralight target configuration and many things in between. The HK USP can be altered between trigger system variants, though it's not something the manufacturer overtly encourages. The ***sig pro*** is the first pistol to my knowledge that allows an armorer to quickly switch from conventional DA first shot/SA followup/ decocker design to double-action-only, simply by switching the ingenious "fire control units."

Finally, as one who likes to think of himself as a connoisseur of trigger pulls, my compliments to the chef. I have seen the rare case of the same company's less expensive guns being slightly more accurate than their analogous full-price ones (i.e., the excellent S&W Value Series). However,

not until this new pistol have I seen a case of the same company's cheap gun having a better trigger pull than its expensive one.

## Shooting The SP2340

On that day in June, only the .40 caliber specimens (SP2340) were in this country. We shot them in both DA/SA and DAO mode. Sights were fixed, in the Von Stavenhagen ("dot the i") pattern that has become a trademark of the SIG Classics. Three-dot night sights are available at extra cost. These are all fixed sights. Some were spot on, and some were a little off here and there, but all were close enough for Government work.

The only ammo provided was Federal's recently introduced Hydra-Shok 155-grain hollow-point. The caliber, of course, was .40 S&W. A compliment here to SIGARMS for sportsmanship. More than one rival manufacturer of pistols in the caliber Smith & Wesson and Winchester jointly created in 1990 simply mark their pistols ".40." This one says boldly on the barrel, ".40 S&W." It is good to see professional courtesy.

The guns proved accurate. From impromptu bench rest positions at 25 yards, I tried five-shot groups with both a DA/SA and a DAO specimen. Having found over the years that what I shoot hand-held for five rounds with no called flyers will generally have in it a "best three" hits that roughly equal what all five would have done from a machine rest. As a result I make two measurements. "All five" shows me what I could have done firing over an auto hood in an emergency, and the "best three" gives a fairer prediction of the pistol's inherent mechanical accuracy.

<b>Pistol</b>	<b>5 shots</b>	<b>Best 3 shots</b>
SP2340 DA/SA module	1-31/32 inches	1-1/8 inches
SP2340 DAO module	2-3/4 inches	1-1/8 inches

By the fall of the year, SIGARMS was able to send me an SP2340 to test on my own. While I didn't have any of that fine 155-grain Hydra-Shok on hand, I tried several other brands in varying weights. None did as well, running 3- to 4-inch five-shot groups on the average. The most accurate in this test pistol (DA/SA module, serial #SP0002546) was the 180-grain Remington Golden Saber. Its overall group size was similar to the others, 3-7/8 inches, but the best three were just 1-5/8 inches apart, center to center. I noticed throughout that the first, hand-chambered round tended to go a bit wide from the rest in SP0002546. It could be that the gun was new and needed breaking in. I suspect that the ones we shot in Philadelphia had been thoroughly "seasoned" in prior testing.

## **Relative Accuracy**

I've owned my share of SIG-Sauer pistols in calibers .380, 9mm, .40 S&W, and .45 ACP. In all but the .40 S&W caliber, they have tied for top honors as the most accurate double-action defense pistols in their calibers. The P229 .40 simply does not shoot as well as the self-same P229 in either of its other calibers (9mm or .357 SIG) and that tells me it's the caliber, not the gun, that's causing the mediocre if still acceptable accuracy.



***Remington's 115-grain +P proved accurate in the 9mm sig pro, delivering five hits in 1-3/4 inches at 25 yards.***

The ***sig pro*** is also produced in .357 SIG, though it wasn't available at the Philadelphia debut. I had my choice of chamberings when ordering my test gun, and the fault is mine in that I ordered the .40. I have seen enough case neck separations in multiple brands of .357 SIG ammunition to be leery of the caliber. The ammo makers assure me that this is all sorted out now. I suspect the .357 SIG would be exquisitely accurate in the ***sig pro***. It has been so in every other .357 SIG pistol (P229, P239, P229 Sport, and P226) that I have tested thus far.

In any case, the accuracy of the SP2340, while not something you'd pick for the national championships at Camp Perry, fulfills the acceptable standard for a service pistol by virtually every such criterion.

If you want more accuracy, just switch to .357 SIG. It's easy enough. The ***sig pro*** requires only a simple user-accomplished barrel swap to change caliber. The same magazines, springs, and extractor will function with either round.

The latest test gun shot to the left with its fixed sights. I see more and more of this lately. It's an industry-wide trend that needs attention. Yes, the SIG sight-pushing tool can easily drift the rear sight back to true, but that should have been done at the factory.

## Ergonomics

George Harris, the knowledgeable instructor at SIGARMS Academy, told me the SP2340 was deliberately engineered to point naturally with a grip-to-barrel angle of approximately 16 degrees. We're all a little different, but I have no reason to doubt him. I close my eyes and bring my SP2340 up where I want it, and open my eyes to find the gun right on target.

Though I'm not personally a big fan of "point shooting," those who are desperately need a gun that will naturally follow the extension of their arm. For me, at least, this one does. As someone who wants at least a coarse visual index of the gun's orientation to the target before I press the trigger, I still appreciate the SP2340's "pointability." It gets me on target quicker and requires no physical adjustment after the eye has verified to the brain that the pistol is where it needs to be and "we have a green light."



***Jim McLoud, Jr. appreciates the good feel of the sig pro.***

I have a couple of those “average sized adult male hands” you read about. Mine fit the ***sig pro*** particularly well with the smaller of the two “grip shells” (for want of a better term) that it is provided with. Still, I can get by with either.

Trigger reach on the ***sig pro*** is right to give good control in both double- and single-action modes of fire. The surface of the trigger is smooth, as it should be.

The trigger stroke in double-action is *excellent*. Better than on any P229 I’ve shot save for the fancy Sport model. Resistance is smooth and absolutely even, from the beginning of the press to the breaking of the shot. On my specimen I’d estimate the pull weight at 10 to 11 pounds. The sights stay dead on target while the trigger comes back for that first, all-important shot.

In the double-action-only model I shot in Philadelphia, that same excellent pull was there for every shot. I found it no problem at all. The people who tell you that you can’t shoot worth a damn with a DAO auto either haven’t shot this one, or haven’t mastered the double-action trigger stroke.

The SIG duty pistols tend to have a long reset after the previous shot, the better to prevent an unintentional second round being fired by a hand that is predictably nervous after a shot needed to be fired at all. Starting with the single-action trigger as far forward as it resets, there’s about a quarter inch of movement before the shot. I found some “good creep” in the test sample.

There is good and bad trigger creep in the same sense that there is “good and bad” cholesterol. Bad creep is friction drag so sharp that it can move the gun you are trying desperately to hold on target while trying to get off the shot. “Good creep” doesn’t move the gun, it just gives you a felt awareness that the trigger is coming back. It’s sort of saying, “Hey, brain, we’re about to fire this pistol again. Has the decision to do so truly been made?” In a service as opposed to target gun, this isn’t a bad thing.

I would estimate the single-action pull on my test SP2340 as about 6 pounds, which is pretty mainstream in a military/police/armed citizen gun these days.

The decock lever and the slide release are shaped differently than on the Classic SIGs, but they're in essentially the same place and work the same way. The decocking mechanism on the SP2340 is particularly crisp and clean in its function. If your hand is habituated to the standard SIG-Sauer type pistol, it will have no problem whatsoever adapting to the ***sig pro***.

## **The Price Is Right**

Designed to sell at a suggested retail of around \$600, the SP2340 delivers the same performance as the P229 of the same caliber that sells for \$800 or more in some gun shops. My specimen is about as accurate as any P229 .40 I've tried, and the well-broken in ones I shot in Philadelphia were more accurate. The ***sig pro*** is a fraction of an inch longer than the Classic gun and a couple of ounces lighter. I like its double-action better than that of the more expensive model.

## **Controllability**

Recoil is no problem with the SP2340. Even with snappy Triton rounds, the front sight rebounds right back onto the target. In Philadelphia, I accepted Walt Rauch's challenge to shoot these guns standing on one leg. There wasn't enough recoil to interfere with balance.

In looking at the pictures from the test of the new sample, I noticed a two-shot sequence. In the first, I'm braced on the bench and asking the photographer if she's ready for me to shoot. In the second, the shot has been fired, the spent casing is spinning toward the camera – and the SP2340's muzzle is already back on target. Photographic proof: the pistol is controllable.

## **Reliability**

We shot a helluva lot of that Federal ammo at the Philadelphia intro — cases of it. Giving gunwriters access to free ammo is like giving Warren Beatty a trip to Mustang Ranch on your chargecard: it's gonna add up. I fired several hundred rounds at the intro. Later, after I got a test weapon, I



fired a few hundred more: Black Hills in 180- and 155-grain hollow-point; CCI Blazer 180-grain FMJ; Winchester in Silvertip 155-grain and 180-grain Subsonic and Ranger Talon; Remington 155-grain JHP and Golden Saber 180-grain; and the hot Triton in both 135-grain and 165-grain hollow-points. I've probably got over 1,000 rounds through SP2340s myself, and have seen a whole lot more fired through them. One observation sticks out in my mind.

I have not yet seen an SP2340 malfunction.

Harris told us that multiple pistols had been fired for 20,000 rounds; being cleaned every 500, with zero malfunctions save for defective cartridges. I can believe it.

## Summary

In my "Self Defense and the Law" column in *Combat Handguns* magazine, I focused on the ***sig pro*** as an example of how modern designers of duty guns are engineering them to respond to civil liability attacks. The guns need to be able to deliver good hits in predictable circumstances. They need to be resistant to unintentional discharge. They need to be natural and ergonomic to deploy. They need to be utterly reliable.

One reader sent a letter noting his displeasure. The article had sounded to him like a thinly disguised ad for the ***sig pro***.

Actually, that wasn't the case. I'll be sending my sample gun back to the factory. There's nothing wrong with it. It's just that a .40 S&W pistol with roughly a dozen rounds "in gun" (you're down to 10+1 if you're a citizen buying a new gun since the Crime Bill passed) always struck me as a compromise between the 16-shot P226 in 9mm Parabellum and the P220 in .45 ACP. I have a P226 with a sufficient number of pre-Ban high-capacity magazines for when I need lots of bullets, and I have my pet P220 for the rest of the time. I simply don't need the ***sig pro***.

But that's not the point. The point is that a lot of people do need a gun like this. SIG engineered this new concept pistol for those people and for civil liability concerns *and* for surviving gunfights with criminals.

If making that point sounds like an ad for SIGARMS, all I can say is, it probably means SIGARMS got it right when they developed and produced

the *sig pro*.



## Chapter 10



### *SIGS That Are Sweet , Not Sauer*



**T**his book is about SIG-Sauer pistols; the double-action semiautomatics with no manual safeties. The SIG name has also appeared, but without any Sauer input, on three fine single-action semiautomatics which do have manual T safeties. As such, we will treat them separately here.

My story on the “Americanized” SIG Neuhausen P210, the P210-8, appeared in the 2002 edition of *The Complete Book of Handguns*. A story on the neat little SIG/Hammerli Trailside .22 was published in the 2001 edition of the same title. Both are used here with the original publisher’s permission.

## **SIG’S New P210-8**

### **A famous 9mm pistol is back, with the touches American combat shooters favor. Will the makeover warrant its extremely high price?**

The SIG P210, often called the SIG-Neuhausen after the city of its birth in Switzerland, is a shadowy mystery gun to many shooters. Often read about because of its almost legendary quality of manufacture, it is rarely seen on the shooting ranges because of its equally legendary high price. The service-grade 210-2 lists at \$1,680, the fancier 210-5 and 6 at \$2,325 and \$2,089 respectively.

Licensing the Petter System, a modification of John Browning’s 1911 concepts developed by Charles Gabriel Petter for the French Modele 1935 7.65mm service pistol, SIG began work on this gun in 1938. Its preview version was the Model 44/16. The P210 as we know it made its debut in 1949 and was immediately adopted by the Swiss Army, which designated it the SP47/8. It would become better known as the *Pistole 49*.

Gun experts have had little but praise for this firearm. In the current issue of the authoritative *Small Arms of the World*, we hear this from W.H.B. Smith and Edward Clinton Ezell: “Nearly 200,000 *Pistole 49* were made for the Swiss Army, most are still in use... This weapon is beautifully made in the finest Swiss tradition. Because of the care taken in fitting the barrel, it demonstrates considerable accuracy.” (1)

In the *Gun Digest Book of 9mm Handguns* by Dean Grennell and Wiley Clapp, the latter stated flatly, “The best 9mm pistol made is the SIG 210, for a variety of reasons and with only a small qualification or two.” (2) Jan

Stevenson, the man the late Major George Nonte called the most articulate of firearms journalists, was always a big fan of the P210. Ditto Leroy Thompson, who has said that he so appreciates its accuracy, he carries it when he thinks he'll encounter long distance shooting but won't have access to a rifle.

The gun simply reeks of quality. You feel it as soon as you rack the slide. Among mass-produced auto pistols, only the Beretta 92/96 can equal the glassy smoothness of the action as the slide runs inside its frame rails, a design feature that was copied in the much more popular CZ75 and numerous other auto pistols subsequently. When you stroke the trigger of a P-210, you get the proverbial "glass rod break" of a .22 target pistol. According to handgunner's lore, the pistol is polished inside and out, even on non-contact surfaces, like the premium-priced Patek-Phillippe wristwatch that shares the P210's country of origin.

Why was it not more popular? Price was certainly a big part of it. There was also concern that the finely fitted parts would not stand up to grit, muck, and dirt in hostile environments, or to neglect in the hands of what Mark Moritz called NDPs (Non-Dedicated Personnel). Noted Clapp, "I wonder how well the 210 would perform when it gets unavoidably dirty. It would seem that the very tight fit of parts, which make the gun all that it truly is, would gum up and cause jams in extended firing sessions in rough service. Despite these considerations, I still feel that the pistol is the best in the world."[\(3\)](#)

Given the American handgun enthusiast's predilection for costly custom handguns, I suspect that neither price nor sensitivity to maintenance was the real problem. Yanks want their auto pistols to reload fast. The P210 for 51 years had a butt-heel magazine that required considerable effort to activate. Its slim, single-stack magazine only held eight rounds, and Americans want a 9mm of that capacity to be just about down to pocket size, or they want a 9mm the size of this SIG to hold buckets of bullets, but they have scant love for a 9mm that's both big and low on round-count. Also, the sliding safety catch behind the trigger guard on the left was awkward for many to reach, and often stiff to operate. The gun was classy and accurate, but it was slow. In the most affordable military models, the sights were too small to see quickly and sharply.

Sales languished, and eventually SIGARMS stopped importing the P210. Imports resumed in 1998, with SIGARMS bringing in a limited number, but the firm ran into the same problems of selling an expensive Old World design in the New World.

So, you can understand how intrigued I was when SIGARMS' public relations liaison Laura Burgess showed me the P-210-8. I handled it, and said enthusiastically, "Sign me up!"

## **"Dash-Eight" Improvements**

The "dash-eight" could be called "the Americanized P210." It comes with adjustable sights that give a good sight picture. A white three-dot pattern is superimposed, presumably on the assumption that the Yank version will be used for fast practical shooting. The thumb safety has been enlarged to the rear and widened considerably. I found it fast and comfortable, though the placement took just a little getting used to. The slide stop lever has always been easy to operate, and this feature has been retained on the "-8".

Perhaps most important, a generously-sized push-button magazine release has been placed behind the trigger on the left of the frame in what we call here "the right place." The button protrudes sufficiently that I thought the trigger finger in left handed shooting might accidentally release it, but this never happened in testing. The magazines dropped cleanly and freely. Curiously, the magazine well was not beveled. I would have expected that in a gun built for fast American-style speedloads.

The grip has been re-shaped, and is the best-feeling P210 "handle" I've ever grasped. The wooden stock is top quality in looks, shape, and execution of its stippling (in lieu of their usual grooving). It fills the palm and locks into the grasp nicely.

The glassy smooth running of the slide that I remembered from older P210s was still there. The super-light trigger I remembered from P210s past was replaced in the "-8" with a smooth-rolling unit whose let-off weight felt like an also Americanized 4 pounds. SIG's Laura Burgess advised me that while the usual P210 lets off at 3.31 pounds, the 210-2 service model is

breaks at 3.92 lb. The test 210-8 feels all of that. The gun has an internal firing pin safety as well.

The big difference is price. The 210-8 carries a suggested retail of – a drum roll here, please – \$4,289. Spare magazines are \$100 apiece.

## Accuracy

The pistol came out of the box with a test target purportedly fired at 50 meters. The six-shot group measured 4.2 inches. (The best five were in 2.55 inches, the best three in 1.1 inches). It did not say whether the gun had been fired from a bench rest or a machine rest.

Now, 2-1/2 inches at 50 paces is *very* good handgun accuracy, though there are guns that will beat that standard. Four inches at the same distance is pretty mundane if you're talking about target guns. Being snowed in, I found long-range testing out of the question and ran targets out to the 25-yard line at the Manchester Indoor Firing Line range. I brought with me three batches of ammo known for accuracy.

Federal 9BP, the 115-grain hollow-point from their Classic line, long ago set the standard for accuracy in the 9mm cartridge. Right up there with it is the Winchester 147-grain subsonic round, originally introduced as the Olin Super Match (OSM) for good reason. Finally, I had some of the last of a cherished lot of particularly accurate Federal 9AP, their standard (not generic) full metal jacket 123-grain “ball” ammo. The gun was fired from the bench using a Millett rest. Each five-shot group was measured once overall, and again for the best three shots, the latter to help factor out human error. All measurements were center-to-center of the farthest bullet holes in question, rounded off to the nearest 0.05 inches. (See chart below.)

Now, this is very good accuracy indeed. The potential shown by the best three-shot measurements is particularly intriguing. But what really struck me was the *consistency* of the pistol. There was no more than fifteen thousandths of an inch difference in the three five-shot group measurements or, for that matter, the three-shot group measurements! Consistency may be the hobgoblin of little minds, but it is also an indication of top quality in any machine.

For perspective on the accuracy of this particular shooting machine, we can look to other tests. Wiley Clapp and Dean Grennell in their 1986 *Gun Digest Book of 9mm Handguns* tested two of the three loads I used at the same distance. Their gun was a P210-6, and the five-shot groups measured 1.5 inches with 9BP and 1.75 inches with 9AP. Results had been 3/4-inch apart with the hollow-point and less than half an inch different with the ball round. (4)

<u>Cartridge</u>	<u>Bullet</u>	<u>Nominal Velocity</u>	<u>5-Shot Group</u>	<u>Best 3 Shots</u>
Federal 9AP	123-grain FMJ	1120 fps	2.15 inches	0.9 inches
Federal 9BP	115-grain JHP	1160 fps	2.25 inches	0.80 inches
Winchester Subsonic	147-grain JHP	990 fps	2.10 inches	0.75 inches
Average			2.166 inches	0.817 inches

The proof target indicated that it had been fired from a machine rest at 50 meters. It would follow that 4.2 inches at roughly 50 yards should translate to 2.1 inches at half the distance, and this is just what we got. It should extrapolate in the opposite direction to roughly 8.5 inches at 100 yards. I didn't have a place to do that at the time, but I had a copy of the article in which Leroy Thompson had called his P210 "a rifle on the hip" because of its accuracy. A photo of a 100-yard target Leroy had shot with an early production, 50-year-old P210 indicated a group size of just under 8 inches.

That, ladies and gentlemen, is consistency. Three P210s, the oldest and newest half a century apart, all grouping to virtually the same point on the graph.

## Perspectives

Clearly, the SIG P210 in its latest incarnation is accurate. But is it as super-accurate as the lore of the handgun would have us believe? Is it accurate enough for its huge price tag?

Just 35 years ago, the P210 was priced exactly the same, to the dollar, as the S&W Model 52 Master target pistol built for the .38 Special wadcutter cartridge. That gun's descendant, the Model 952 from the Performance Center, sells for \$1,200 and fires the same 9mm round as the SIG, but into



groups averaging around 1.5 inches. The same company's PC 5906 has been known to put five rounds into an inch at 25 yards, and 1-inch groups at that distance are *guaranteed* for the PPC-9 that the Center builds for police pistol teams.

It may be unfair to compare the P210 to other brands. It's certainly unnecessary. One need look no farther than the SIGARMS catalog itself.

I've shot sub-1-inch groups on two occasions with the P220, one European and one American style, both using Federal Match 185-grain .45 ACP hollow-point ammo. I've lost count of how many times I've seen the P226 shoot 2-inch groups or better with good 9mm Parabellum ammo. In 1998, testing the then-new ***sig pro*** near Philadelphia with Walt Rauch and some other gun writers, I got a sub 2-inch group using Federal 155-grain Hydra-Shok .40 S&W ammo. (Under by all of 1/32 of an inch, mind you, but still under the 2-inch mark.) In testing the P-245 compact .45 ACP, we got 2 1/8-inch groups with Federal Match 185-grain JHP, 2 3/8 inches with Pro-Load 230-grain ball, and 2.5 inches with Winchester 185-grain Silvertip. Finally, while touring the SIGARMS plant in Exeter, New Hampshire in 1998, I had the privilege of watching SIG's Casey McCarthy shoot an entire magazine of 125-grain CCI Lawman into less than an inch with a .357 SIG P229 Sport model. All shooting mentioned in this paragraph was at 25 yards. All were five-shot groups except for Casey's superb marathon performance.

All the modern SIGARMS pistols just mentioned are modern guns, drop-safe, and utterly reliable with virtually any cartridge within the range of what they're chambered for. Best of all, they don't cost you the price of a good used car.

## Disappointments

For a pistol that costs \$4,289, I would have expected more. Night sights. Ambidextrous controls. Given all the effort put into making this "speed-load friendly," I would like to see a beveled magazine. It reloads faster than it did, but not quite as fast as a regular SIG-Sauer or ***sig pro***.

Older magazines will not be compatible, lacking the cutout for the push button release. Conversely, new mags won't fit older guns, the way

American style P220 magazines will fit a European style P220 .45, but not vice versa. The reason is the mags for the P210-8 have a polymer extension. This does aid somewhat in speed and positive reloading, and with a very large hand, may give a welcome additional grasping surface. However, it probably won't allow the butt heel release to lock in.

The accuracy? It's "plenty good," but it's not the true "1-inch super match-grade" of handgun accuracy that you expect for the money, and expect from the P210 legend.

Workmanship? Fit was almost flawless. The safety catch did score a nasty drag mark into the bluing of the frame almost immediately once I started shooting the gun. In disassembling it, I discovered that there *were* tool marks on the inside. Darn. Another handgun myth bites the dust. Actually, there were some minor tool marks on the bottom front of the slide, just ahead of the dust cover. Nothing that would impair the smooth function, though.

Finish was what SIG calls a matte black. It was nice. It wasn't fancy. It didn't look like what you'd expect on \$4,000 pistol.

Finally, *this gun bites!* Not in the figurative sense, but literally. The sharp little hammer spur pinched the web of my hand each time the slide re-cocked it after a shot. It wouldn't take much to re-shape the hammer and make it more user-friendly.

## A Matter Of Value

According to the 1966 *Gun Digest* The P210 went for \$165 that year with polished blue finish and wooden stocks, three bucks less with plastic grips and matte finish. At the time, a Colt Government .45 was \$90, A Python was \$135, and a Ruger Standard .22 auto, \$41.50. S&W's deluxe .38 target pistol, the Model 52 Master, sold for the exact same \$165 retail as the SIG.

By the 1986 edition of the same publication, the fixed-sight P210-1 or -2 cost \$1,275 to \$1,600 depending on which of the two importers had brought it in. The target-sighted -6 model was \$1,580 as imported by Osborne's Supplies, and \$1,750 from Mandall's Shooting Supplies. By contrast, the Python started at \$577.50 and the Government Model .45 at \$459.50, Ruger's .22 pistol was at \$168, and the S&W M-52 was a relative bargain at

\$573.50. The super-accurate HK P9S Sport Target, its fanciest version, retailed for \$990. The SIG P220, which had replaced the P210 as Switzerland's national military pistol, was \$585.

In the 1991 edition of *Gun Digest*, which had SIG-Sauers on the cover, a P226 and a P228, the price on the P226 was \$780. The P220 was \$720 in the American style with the push-button mag release, \$695 in the Euro style. Other prices: Python, \$759.95. Ruger .22, \$224.75. Colt Government: \$624.95. S&W M-52 Master: \$832. The P210-6 was now \$1,900, imported only by Mandall.

Little more than a decade later, "American style" renovations still cost more at SIG. Roughly (choke) twice as much. The P210-6 carries a suggested retail of \$2,089. The Model 52's descendant, the PC 952, is \$1,200. That gun has all the features of the P210-8 except a firing pin lock, and has a beveled mag well.

My own idea of a good buy in a medium-caliber pistol outfit for almost \$4,300 is a **sig pro** and something to carry it in. Like, oh, the glove box of a perfectly functional 1993 Nissan Sentra for \$3,500 ([6](#)), which leaves money for ammo.

A new P226 lists at \$851; for the price of the P210-8, you can arm five people with a classic SIG that shoots about as well. Or you can arm seven good people with a **sig pro** each (\$602 per) and ammo. That primo P229 Sport (whole mag, 1-inch, 25 yards) is \$1,353. Meaning you could get one each for yourself, your significant other, and your oldest kid, plus some .357 SIG ammo, for the cost of a single P210-8.

But where's the prestige in that? They're importing a Rolex-quality gun with a Rolex-quality price from the land of the Rolex, and isn't that all about prestige?

Let's talk about that. My old daddy was a jeweler and watchmaker. He was licensed to repair the Rolex. I learned from him. The watch I wear now has an "E-X" at the end of its name. However, its first three letters are "T-I-M." The main function of the Rolex, in addition to telling time as well as the best Timex but no better, is to show the world the wearer has made money.

How do you do that with a P210, which (a) will be unrecognizable as anything but "a gun" to 99 out of 100 people you meet, and which (b)

unlike the Rolex, won't be flashed in public. If the Rolex was carried concealed, would anyone but watch collectors buy them?

You can earn prestige and show you've made it by buying the excellent SIGARMS pistols. You just bypass the P210-8. For what it would cost, you can purchase nine of the unquestionably "best buy" SIG/Hammerli Trailside target pistols. Amply accurate and lightweight, they are ideal for a junior pistol team, and in league matches nine guns gives you enough to simultaneously field two four-person teams and have a spare gun. There'll be money left over for buckets of .22 LR ammo, and for the team shirts that can bear your name.

*That*, dammit, would buy more respect from any of our peers than owning an admittedly very nice, but unquestionably and grotesquely overpriced, 9mm pistol.

### ***References***

1. (1) Smith, W.H.B., and Ezell, Edward, *Small Arms of the World*, 12th edition, 1983. Harrisburg, PA: Stackpole Books. P. 673.
2. (2) Grennell, Dean A., and Clapp, Wiley, *Gun Digest Book of 9mm Handguns*, 1986. Northbrook, IL, DBI Books. P.226.
3. (3) *Ibid.*, P.227.
4. (4) *Ibid.*, P.206
5. (5) Thompson, Leroy, "Swiss Perfection for Y2K," *Handguns* magazine, October 1999, P.69.
6. (6) *Boston Globe*, Classifieds, 3/12/01.

## Chapter 11



### *SIGARMS' Hammerli Trailside*



**This slim, light, handy .22 pistol is more accurate than you'd think it had a right to be!**

wasn't the first gun writer to get my hands on a SIG Trailside. I write mostly about self-defense guns and police gear, not recreational handguns,

---

**I** and probably wasn't even on the radar screen for test samples of this sporting pistol. Like you, I read about it in the NRA I magazine *American Rifleman* and elsewhere. My eyebrows rose at the glowing reviews, especially when they talked about its phenomenal accuracy.

I was interested and called SIGARMS in Exeter, New Hampshire to ask for a test sample. It was a difficult task since demand is so great they can't keep these guns in stock.

You've been told the truth. I'm happy to report that this gun is every bit as accurate as the reports have promised.



***Target accuracy, light weight, affordable pricing make Trailsides popular.***

## **A Specific Niche**

Since the long-ago and much-lamented departure of the Colt Woodsman, there has been an empty niche in the sport handgun market. The Woodsman .22 auto was flat and easy to carry, even tucked in the outdoorsman's waistband. It had a very good trigger pull, and was so inherently accurate that target shooters hung barrel weights on them, fitted them with new sights, and took them to matches. Colt paid more attention to the market then than in more recent decades, and they picked up on this. Soon they introduced a match target version. For decades, the Colt Woodsman

dominated the .22 stages of bull's-eye shooting, then the only real handgun competition game in the country, until the coming of heavier and more sophisticated .22 target pistols like the High Standard Supermatic and the Smith & Wesson Model 41.

Let's look at what the 1940 Stoecker *Gun Bible* had to say about the Woodsman. "Graceful in appearance and beautifully finished. It is furnished with an unusually comfortable grip that fits the hand snugly and securely... Fast and certain action...a trigger pull that is smooth and crisp. Ten-shot magazine and slide-lock safety."

There have been numerous nice sporting .22 autos since. Some had the lightness of the old Woodsman, but few had its combination of good inherent accuracy and excellent *practical* accuracy. "Inherent accuracy" is what is mechanically built into the gun. Sometimes, though, the human engineering of the pistol is so poor that only a device like a Ransom machine rest will be able to deliver that accuracy downrange. "Practical accuracy" is what the gun can do in our hands, and it encompasses ergonomics as well as inherent accuracy.



*Orthopedic target grips come on the high-end version of the Trailside target .22.*



*Trigger stop on target variation of Hammerli Trailside adjusts to limit overtravel.*

There was the Woodsman. Now there is the Trailside.

“Graceful in appearance and beautifully finished”? Check. “Furnished with an unusually comfortable grip that fits the hand snugly and securely”? Check. “Fast and certain action”? Check. “A trigger pull that is smooth and crisp”? Check. “Ten-shot magazine and slide-lock safety”? CHECK!

## **Trailside Features**

SIG’s affiliate, Hammerli, morphed the splendid Model 208 series, designed for demanding International Standard Pistol competition, into this “field model.” They did the reverse of what Colt had done some 60 years earlier. Where the American firm had built up their accurate sporting pistol



into a full-fledged target model, the Swiss company essentially downscaled their magnificent target gun into a field sidearm.

The original Woodsman with 4-1/2-inch barrel weighed some 27 ounces. In its first competition incarnation, the Woodsman Match Target of 1940 had a 6-1/2-inch barrel and weighed 36 ounces. In the 1950s, updated variations with an underlug barrel went to about 38 ounces, still with the 6-1/2-inch barrel length.



***Slim, graceful, and light, the Trailside is the best .22 target pistol for the small-statured shooter since the old pre-war Colt Woodsman Match Target, in the author's opinion.***



***Light and handy, the Trailside in standard configuration lives up to its name as an outdoorsman's .22.***

The Hammerli 208S pistol weighs 37-1/2 ounces unloaded and has a substantially constructed barrel a tenth of an inch under 6 inches. The Trailside weighs 28 ounces with a 4-3/4-inch barrel. Great efforts have been made to transfer the 208's action to the Trailside, and to incorporate Hammerli's legendary ability to produce accurate barrels. These efforts, as we shall see, have come to a happy fruition.

Two models are available, an adjustable-sighted version with laminated wooden grips and a plastic-stocked plain-Jane version with fixed sights. We got the latter. The simple fixed sights gave an excellent picture to the eye: big, blocky rear and big, highly visible front with lots of light on either side as you aim the pistol.



***Jaskiel MacDowell was 11 when this photo was taken while he won the National Junior Handgun Championships in sub-junior class.***

Magazine release is the usual "American style," a push button behind the trigger guard. The magazine does not drop free, but falls slightly downward

for easy retrieval by hand from the magazine well. This is not a problem and probably an advantage. The magazine won't be accidentally dropped to the floor in a bull's-eye match when you meant to withdraw it and set it on the shooting bench, and there aren't many competition venues where you need a speed reload of a .22 sporting pistol.



***Jimmy D'Elia, 12, nails steel chickens at 40 meters with the SIG/Hammerli Trailside.***

The magazine itself is an ingenious thing, almost weightless, made purely of polymer except for the magazine spring. It has a hollow in the bottom of its base, something you see with the 10-round "Clinton" magazines SIG makes for its big "Classic" series auto pistols. I can't stand that. It can falsely tell a finger probing in the dark that the magazine is out

of the gun when in fact it's still in there. It wouldn't hurt anything to add an ounce and fill this hollow.

The plastic stocks on the test gun felt very nice in the hand, widening toward the bottom. They may not be perfect for those with the tiniest hands and the shortest fingers. In a natural grasp, my index finger reached the trigger at the pad of the last phalange. I have that "average-sized adult male hand" that gun designers talk about. This means the reach to the trigger will be short for very small hands.

This is a single-action pistol with an excellent trigger pull. I would make it right at 4 pounds. It is not the pure "glass rod" break of a 208 Hammerli or other world-class match target pistols. The release is soft, but it is still clean and doesn't pull the sights off target. A surprise break is easily attainable.

I could not feel any "backlash." This is the annoying movement that happens after you've released the sear and broken the shot, and the weight your index finger is applying to the trigger is no longer resisted. This causes the trigger to slam back against the frame, jarring the gun. A "trigger-stop," sometimes called just as descriptively an "anti-backlash device," is affixed to the frame inside the guard behind the trigger. The one on the Trailside has an ingenious spring-loaded ball. It effectively stops extraneous, aim-disturbing rearward movement of the trigger, yet it would leave enough movement possible to fire the gun if it got out of adjustment and stopped the trigger prematurely when a shot *needed* to be fired.

A manual safety, set up for right-hand use only, is found at the left rear of the slide. It differs from the usual slide-mounted safety lever in that "up" is "Safe" and "down" is "Fire." A conspicuous red dot appears along with a capital "F" when the gun is ready to go, and a large "S" is visible when the safety catch is locked on.

I had no trouble releasing the safety with a downward swipe of the thumb. However, when trying to "on safe" the Trailside, the upward movement was stiff enough that I had to either shift the gun in my hand to do it with the gun hand thumb, or simply use the free hand to push the lever up into the "on safe" position.



***The electronic timer is running behind them as Jaskiel MacDowell, foreground, and his dad James vie for the National Champion Parent/Child Team victory at the National Junior Handgun Championships, 2002. Both are shooting Trailside.***

The slide stop is where it should be: readily accessible to the right thumb or left index finger of the right- or left-handed shooter respectively. However, it is in a position where if the shooter uses a high-thumb grasp in right-handed shooting, the thumb will ride that lever and keep it from locking the slide open after the last shot is fired. The same is true of the SIG Classic centerfire service pistols. Perhaps the always-practical Swiss simply assumed that smart shooters would curl their thumbs down for maximum grip strength and not impinge on the working parts of their pistol.

The butt of the pistol flares widely. This creates a flat-bottom surface that rests beautifully on a bench, or on the ground when you shoot prone. It's not as if the Trailside was a concealment gun and you had to worry about this as a bulge point. For "rested shooting" when there's time to stabilize the gun for the shot, it's an advantage.

Finally, the gun has rails atop the barrel for attaching a scope or a red dot sight. My shooting buddy Walter Carlson donated the use of a Leupold 4X pistol scope with appropriate mounts. This excellent piece of handgun

optics aided greatly in wringing out the Trailside pistol's surprisingly good accuracy.

## Shooting the Trailside

Accuracy testing was done outdoors in cold weather, from the bench in a two-handed hold. Five-shot groups were fired with each type of ammo, and measured center-to-center of the farthest bullet holes for all shots (a good test of what the gun can do in a solid field position when the handgunner is not experiencing, or at least not affected by, stress). They were measured again for the best three shots, which if an experienced shooter is firing the gun will come remarkably close to what the pistol can yield for a five- or even 10-shot group from a machine rest. That's a "shorthand test" that saves a lot of setup time and a lot of inserts for your Ransom Rest. Because of the good things I'd heard about its accuracy, I tested the Trailside more with target ammo than plinking ammo.

The following results were gained at 25 yards, with the Leupold 4X scope in place.

<b>Cartridge</b>	<b>5-shot group</b>	<b>Best 3 shots</b>
CCI Green Tag	1.2 inches	.7 inches
CCI Pistol Match	1.2 inches	.7 inches
Eley Pistol Match	1.9 inches	.75 inches
Winchester T-22	2.15 inches	1.0 inches
Remington	2.1 inches	0.65 inches
Hi-Speed		

The above does not tell the entire story. All three of the match-grade rounds shot pretty consistently spread five-shot groups. However, the Remington Hi-Speed solid, a "standard .22 plinking load" if you will, and the Winchester T-22, kind of a cross between a cheap target round and a practice round, both suffered "4+1 syndrome" in this pistol. First commented upon in print by my colleague Wiley Clapp, this is the tendency of certain semiautomatic firearms to place their first shot in one spot and

subsequent rounds in another. What we think is happening is that the parts of the gun wind up in a very subtly different “battery,” or position vis-à-vis one another when the gun is ready to fire, when the first cartridge is hand-cycled into the chamber. Another “battery” is in alignment when the mechanism automatically cycles subsequent cartridges into the same firing chamber.

The Remington load had four of its five shots in three-quarters of an inch, a group spoiled by the first shot that spread the total to 2.1 inches. The Winchester load had a 2.15-inch spread counting the first shot, but put its last four into exactly an inch and a half.

Two other accuracy tests were done. Because the temperature was below freezing and it was necessary to “shoot a group, go back to the car and warm the hands at the heater, and shoot the next group,” each was limited to two types of ammunition.

If the Trailside was this accurate at 25 yards, what would it do at two thirds that distance, 50 feet? The reason this was an issue was that a stronghold of .22 target pistol shooting is the so-called “gallery match,” done indoors at a regulation distance of 50 feet. The results were:

### **Cartridge      5-shot group      Best 3 shots**

Eley Pistol Match	.75 inches	.30 inches
Winchester T-22	.7 inches	.25 inches

I chose those two cartridges because the pricey Eley is the standard against which other .22 rimfire target ammunition is judged, at the highest levels of competition. You see the results in an accompanying photograph. The pattern of the five shots was such that all five would have hit a single .22 Long Rifle cartridge, if only on the edge, at that 50-foot distance. *This is accuracy!*

The T-22 is an affordable standard-velocity cartridge of an accuracy level suitable for club competition, and less than world-class tournaments, or so Winchester’s modest advertising would imply. Yet I couldn’t help but notice that this “economy” round produced in the USA *outshot the expensive British cartridge.*

If I seem a little too exultant about that, forgive me. It's not a xenophobe thing or a chauvinist thing. I love and respect my brothers and sisters who formerly owned handguns in Great Britain. I used to teach handgun classes there every year until the Tony Blair government disempowered its subjects and made them turn in all their pistols and revolvers. The surviving Spitfire pilots, and their aging relatives who remember standing guard duty on British shores with handguns, rifles, and shotguns donated by American citizens when a Nazi invasion seemed imminent only a little more than half a century ago, will understand. So will the yeoman archers of Agincourt, who must be restless in their ancient graves at the recent turn of events in Mother England.

Back on track, though, another question remained unanswered with the Trailside pistol. How well does it shoot with those fixed, "iron sights"? Again, only two loads were selected to tell the tale:

### **Cartridge      5-shot group      Best 3 shots**

CCI Pistol Match	2.4 inches	1.1 inches
CCI Green Tag	1.7 inches	1.05 inches

Both groups were evenly distributed. Both, unfortunately, also grouped about four inches to the left at 9 o'clock. This is nothing that couldn't be fixed by moving the rear sight slightly in its dovetail, but the gun belonged to SIGARMS instead of me, so I didn't try. It did, however, tell me that the adjustable-sight version might just be worth a look. For my own needs, I'd register the fixed sights for my favorite load and never look back.

## **Reliability**

My friends and I put a thousand-some rounds of all manner of .22 Long Rifle through this neat little pistol. There were only three malfunctions.

This gun had a love/hate relationship with the Winchester T-22 round. Love: it shot it very accurately. Hate: in a couple hundred rounds, there were three malfunctions with this cartridge and this one alone. Two were misfires. Each time there appeared to be a solid hit on the rim of the cartridge by the firing pin. Each was given a second try. One fired at that



point, and one didn't. There was also one malfunction of a spent casing caught in the ejection port. It looked to me as if it had possibly hit the scope on the ejection arc and bounced back into the open-top feedway. It happened to be a Winchester also. I turned the gun over, jacked the slide, and kept shooting.

There were no other malfunctions. Veteran shooters well know that .22 pistols are idiosyncratic about what ammo they like and what ammo they don't, more so than larger caliber guns firing centerfire cartridges. One possible ammo incompatibility in one particular specimen doesn't exactly torque me out.

## Value Factor

What's this new gun good for? It replaces the long-lost Woodsman – the light, accurate, reliable .22 auto that Ernest Hemingway and Gary Cooper and Charles Askins Jr. swore by. It comprises efficiency, convenience, and quality rolled into one compact, accurate small-bore auto pistol package.

For those getting started in one-hand bull's-eye shooting, the .22 is the place to start. Buy a Trailside. Put on optical sights like everyone you're shooting against, and you'll have accuracy you can take to the bank, and to the winner's circle. SIGARMS ads say modestly that you may not take this model to the Olympics like you would its big brother the Model 208S. Maybe not, but let me tell you something. The 50-foot slow-fire 10-ring on a gallery pistol target measures about 9/10 of an inch in diameter. The 10-ring of the timed and rapid fire target is twice as big. This pistol has shown me it can shoot a perfect score on those targets at that distance.

Long strings of fire with the pistol extended at the end of one arm can be tiring until the shooter has developed the muscles for it, muscles not normally used for other things in life. New shooters in this sport thus benefit from pistols that are light but accurate. Pistols that weigh perhaps 28 ounces and can shoot five shots for five into three-quarters of an inch. Pistols like, oh, the Hammerli Trailside.

At the time Colt upgraded their sporting .22 auto pistol to a competition model, the 1940 Stoecker *Gun Bible* listed the standard Woodsman at \$32.75 and the new Match Target Woodsman at \$41.75. Now, at the dawn of the

new Millennium, Hammerli has taken their world-class match grade target pistol, the Model 208S that retails for \$1,925, and made it available in a lightweight sportsman's model for about \$400. Our fixed-sight test gun can be duplicated at a suggested retail of \$398. Adjustable sights and fancier grips will run the price somewhat (but not unreasonably) higher.

I recently had to hire an economist as an expert witness in a hard-fought legal battle. The time for his research and testimony cost our side about \$20,000. I didn't ask him about Colt Woodsman and Match Target Woodsman versus Hammerli 208S and Hammerli Trailside. If I had, I suspect he would have told me it was a hell of a deal, maybe the deal of the year in the world of value for your money when buying a new handgun.

Basically, six decades ago a plain-Jane Colt Woodsman cost 75 percent as much as its competition-grade sibling, the Match Target. Today, the Hammerli Trailside costs *20 percent* as much as its sibling in full match trim, the Model 208S.

But I suspect you figured that out already without paying an economist 20 grand.

Thanks, SIGARMS, for making the Hammerli Trailside available to all of us!

## Chapter 12



### *GSR: The SIG 1911*



**I**n November 2003, SIGARMS announced their new 1911 pistol at the national sporting goods wholesalers' show. It stirred so much interest that their website almost crashed from the unprecedented number of hits.

Dubbed the GSR for Granite Series Rail, this is the first all-American SIG with no European design input. In February 2003, SIGARMS' Mark Kresser talked with former IPSC World and USPSA National pistol champion Matt McLearn, an accomplished 1911 pistolsmith, about what he'd like to see on a 1911 if SIG was to produce one. For one thing, Matt told Mark, "Make it look like a SIG."

The “granite” in the title presumably draws from the Granite State, as New Hampshire (where SIGARMS is located) is known. More Granite Staters got into the act as SIGARMS’ own New Hampshire-based crew approached Makers, an engineering firm in Manchester, for assistance. Mechanical engineer Kevin Webber and industrial designer Chris Aiston weren’t gun guys, at least not to start, but their input brought a fresh outlook to the project. Meanwhile, McLearn was hired for three months as a consultant on the project, and that worked out so well that he became a SIGARMS employee in late October. By then, the design was pretty much finalized.



### ***A 1911 with a “SIG look.”***

The formula, says Matt, is strictly “made in USA.” Caspian produces the frame, with integral light attachment rail, in neighboring Vermont, as are the slides; Caspian makes both for Wilson Combat, and these are pretty much the same. In a logical *quid pro quo*, the superior outside extractor is made by Wilson and used by Caspian, and of course, now by SIGARMS. Caspian also makes the firing pin, firing pin stop, beavertail grip safety, and ejector. Wilson makes the GSR’s mainspring housing (steel on the silver guns, aluminum on the blue ones), and the thumb safety.



***Federal Match proved deadly accurate from an impromptu bench rest at 25 yards. This GSR has Nitron finish.***

The bushing and sear come from George Smith at EGW, the appropriately named Evolution Gun Works. The distinctive trigger – and the slide stop, magazine catch, and plunger tube – come from Grieder Precision. Performance Engineering is the vendor the for hammer, grip screws and bushings for same, and the 11 pins involved in assembling the classic 1911.

Wolff is providing the springs: An 18-pound recoil spring, 19-pound mainspring, extra power firing pin spring and plunger tube springs, heavy-duty extractor spring, and standard strength on everything else, is the prescription there.

Storm Lake did the barrels, with a one turn in 16 rifling twist (actually, 1:15.75, not to put too fine a point on it). They're made of 416 stainless. In fact, the whole gun is stainless, 416 alloy on the slide and 415 on the frame, according to Matt. The blued version is Nitron over the stainless; the “regular” is a pleasant silver color. Stock options are nicely checkered wood from Herrett, and businesslike black plastic from Falcon. The Italian ACT eight-round magazines, and the three-dot streamlined fixed sights, both come from Novak's.

The contributors to the effort read like a “who's who” of the best in custom 1911 components. McLearn is in charge of assembly and production. The question was, how well did it all come together?

## On The Firing Line

For testing Dana Owen of SIGARMS' law enforcement/military sales wing joined Matt, IDPA Master Steve Sager, and me at the SIGARMS Academy facility. We received a welcome break in the rotten weather and were able to use the outdoor range. Our samples were production guns, two of the first to come off an assembly line commanded by McLearn and four skilled workers on his staff, along with the entire deburring and polishing crew available to them. One blue and one silver, the test pistols were both in .45 ACP; this is the initial chambering and can safely be predicted to be the most popular. However, there are plans to produce this gun in 9mm Luger, .40 S&W, .38 Super, and .357 SIG if all goes well. The Academy had PMC hardball and Speer Lawman ball on hand; I had some Winchester hardball, Winchester 230-grain JHP, and an old box of Federal Match 185-grain mid-range SWC in the car. We set up a wooden bench at the 25-yard line.



*The only round the SIGARMS 1911 jammed on was the feeble, hard-to-feed “softball” target load that doesn’t work in most other 1911s, either; here, it has locked up the gun with a 12 o’clock feedway stoppage.*





*Ayoob shot the test groups from this makeshift bench rest at 25 yards.*



*The GSR is very controllable with .45 hardball. World Champ Matt McLearn has a spent casing over his head in mid-air, but is still dead on target.*

<u>Brand</u>	<u>Bullet</u>	<u>5-Shot Group</u>	<u>Best 3 Shots</u>
CCI/Speer Lawman CleanFire	230-grain FMJ	4-5/8 inches	2-1/4 inches
Federal Match Midrange	185-grain SWC	1-5/8 inches	3/4 inches
PMC	230-grain FMJ	2-1/16 inches	5/8 inches
Winchester	230-grain JHP	1-1/4 inches	3/4 inches
Winchester USA	230-grain FMJ	1-7/8 inches	1-1/8 inches

The silver specimen was spanking new, and it wasn't fair to accuracy-test a gun that hadn't been broken in, so I benched the Nitron sample that had been shot some. Each group was measured for all five shots, of course, and then again for the best three hits. The latter measurement is a good way to factor out human error when you don't have a machine rest on hand, and get a better idea of the pistol's inherent accuracy.

Overall, this was excellent performance. The gun didn't group well with CleanFire, but that's common with lead-free primers. It's because of their erratic ignition, which is why CCI/Speer doesn't use them in their famously accurate Gold Dot line, which we unfortunately did not have on hand. The Winchester hollow-point actually outshot the Federal Match. This 230-grain JHP is uncommonly accurate ammunition. My box was from a law enforcement lot, but Winchester is now running essentially the same load in the generic, low-priced USA line. It is good to see a pistol that delivers champagne performance at beer prices. Note particularly the extraordinary inherent accuracy potential promised by the "best three shot" measurements, with three out of five under an inch.



*Even with El Cheapo generic hardball ammo, the GSR delivered this impressive group at 25 yards.*





***Test gun was very accurate with both Winchester 230-grain JHP and hardball.***



***The kid's still got it. Ten years out from his World Champion title and four years since his last match, Matt McLearn still shoots an excellent offhand group with a SIGARMS GSR.***



***From this perspective we can see the absence of front slide serrations, the absence of a full-length recoil spring guide, the presence of a light rail on the frame, Novak sights and a Wilson-designed heavy-duty extractor on the slide. These are all good things.***

With none of these rounds did the GSR exhibit the common auto pistol idiosyncrasy known as “4 + 1 syndrome.” This is believed to occur when the first hand-cycled round sends its bullet to a different point of impact vis-à-vis point of aim than the subsequent shots. The latter rounds are automatically cycled into the chamber and therefore are fired when the parts have, very subtly, come into a different alignment of firing position, or “battery.”



***The “R” in GSR is the rail machined into the dust cover of the frame.***



***GSR on the GSR. Covered with gunshot residue and filthy from hundreds of rounds, the SIGARMS 1911 was still 100 percent reliable.***

When “4 + 1” doesn’t happen with a 1911, you know that there has been some truly superb fitting of parts. This is the case here. “We specify a .752 inch maximum width on the frame rails, and .752 inch *minimum* width on the slide grooves,” explains McLearn. The GSR’s barrel bushings are fitted snugly, but hand-tight.

The polish is equal in quality to the fit. The slide moves back and forth like a much more expensive semi-custom gun, not a mass-produced one. There is almost no palpable play in the mechanism.

## **GSR On The GSR**

In my world, “GSR” stands for “gunshot residue.” The SIGARMS GSR pistols were coated with GSR when we were done putting hundreds of rounds through them, often as fast as we could pull the triggers. That might not sound like much until you remember that one of the people running those triggers was former World Champion Matt McLearn, who runs at a speed most shooters can only dream of.

There were *no* malfunctions of any kind with any of the ball or duty loads. The only round this pistol didn’t want to feed was the “softball” Match SWC. Too feeble with its low velocity to cycle a pistol with an 18-pound recoil spring, this round is also a nightmare to feed because of its strange button-nosed shape. It was hell for accurate, though. Frankly, I don’t see anyone buying this gun to shoot light loads in. It’s a defensive piece.

## That “SIG” Look

McLearn’s suggestion, “Make this gun look like a SIG,” has become a reality. The shape of the slide, narrow above and widening in a band at the bottom, at the middle of the gun, looks “SIG-ish” indeed. The grasping grooves on the slide put you in mind of the extremely ergonomic pattern found on the little P232 .380. It was easy to manipulate. The GSR’s trigger guard has a thick, squarish, heavy duty look that is also rather SIG-like, to this reviewer’s eye.

Matt says he weighed the GSR on a digital scale and got the standard “Government Model” 39 ounces. Most all steel 1911 “rail guns” are distinctly heavier than that. Sounds as if the reshaping of the slide has taken some weight off on top, despite the massive look. If you thought the original 1911 was “Old Slabsides,” this rendition is more so. Still, the weight saving will be appreciated.

Like other SIGs, and thankfully unlike the current spate of 1911s including even most Colts, this gun did *not* have trendy grasping grooves at the front of the slide. Quite apart from “good looks” and tradition, grooves in that spot encourage shooters to manipulate the slide from the business end, altogether too close to where the bullet comes out. John Browning was wise enough to put the original 1911 grasping grooves at the rear of the slide, where the operating hand will be out of harm’s way. I am grateful to McLearn, George Smith (who had a lot of input into the SIGARMS 1911 project), and the company itself for leaving the damn grooves off the front.



*Not your grandfather's 1911, this silvery stainless SIG sports an improved slide grasping groove configuration, Herrett stocks, a state-of-the-art trigger and hammer.*



*The Wilson thumb safety, Grieder Precision trigger and slide stop, all proved ergonomic.*



***Falcon high-traction plastic grips complement the Nitron finish of this GSR.***



***The classic 1911 “feel” is all there. With a lighter slide, the pistol balances like a standard Government Model despite added frontal weight of the flashlight rail on frame’s dust cover.***

The same goes for the welcome absence of a full-length recoil spring guide rod. McLearn and the engineers tested intensively with and without a full-length guide rod, and concluded that it was unnecessary and had no function except to make the gun much more difficult to take apart and reassemble. I had come to that conclusion a long time ago. So had master 1911-smiths like Bill Wilson and Les Baer, and so had gun experts like Charles Petty and Chuck Taylor. So had the 1911 guru, Col. Jeff Cooper, before the rest of us. I, for one appreciate, SIGARMS dispensing with the full-length guide rod.

***From this perspective we can see the massive front of the frame, and conventional recoil spring cap.***





***The Italian ACT magazines, like the sights, come from Wayne Novak. They work.***

SIGARMS does not produce a pistol that isn't drop-safe. This one won't change the paradigm. The proven Colt Series 80 passive firing pin lock is employed. I asked if it was licensed from Colt. The reply came with a shrug: "Their patent ran out."

McLearn expanded upon the subtleties of the firing pin safety. "Proper heat treating is important to its function," he said. "Experimentally, we put in a set without hardening the parts and shot hell out of the gun. By 10,000 rounds, we were seeing burrs on the plunger that compromised function. Then we tried again, with the parts properly hardened. There was no change in shape or dimension."

Speaking of parts, most everything will be interchangeable with standard 1911 components. Not the extractor obviously, and not the plunger tube. "We machine a .015" slot into the frame, then stake it on," McLearn explains. "The slot takes all the stress off the tube." Having seen my share of conventionally-staked 1911 plunger tubes come loose and screw up the gun – and having one integral plunger tube on another manufacturer's 1911 break, which effectively killed the frame and required a new frame – this sounds like an improvement to me.

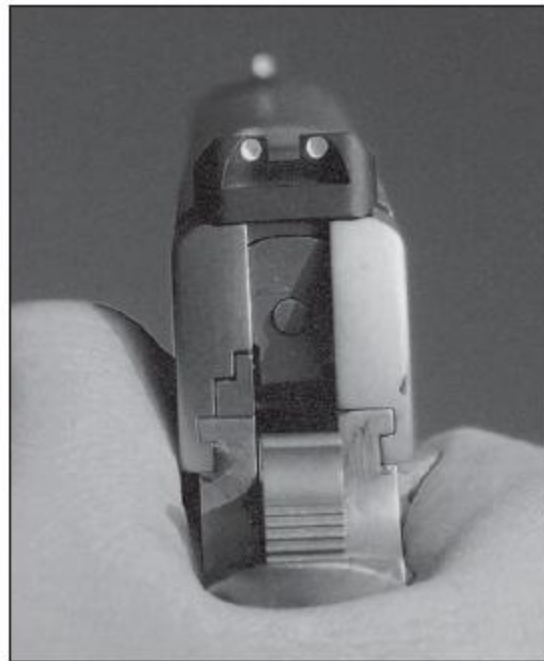
Trigger pull weight is specified at 4.5 to 5.5 pounds, which is just right for a duty or personal protection gun designed to be used under high stress,



as opposed to a target pistol. The two we fired were right in the middle, and felt like about 5 pounds even. Trigger breaks were smooth and clean, and conducive to good hits without the sort of anticipation that makes the shooter jerk the trigger.



***The manual of arms with the GSR is exactly the same as with John Browning's first 1911. All the controls are in the same place as 92 years before.***



***Despite the normally front-heavy “rail” configuration, this pistol “feels like a standard 1911.”***



***A 1911; a pin for an external extractor; the word “SIGARMS” on a 1911 barrel. Culture shock!***

Having been an enthusiastic 1911 shooter for some 43 years, I was very impressed with the SIG GSR. Sager, who has been shooting 1911s almost forever, is extremely picky about them, having been spoiled by Wilson Combat and Kimber deluxe target .45s and .38 Supers. He fell in love with the SIGARMS GSR, if not at first sight, certainly at about his first 100 rounds or so.

With a suggested 2004 retail price of \$1,077, this gun's smoothness, reliability, and accuracy will make it *extremely* competitive with other top-line 1911 pistols. It equals the performance of some others that cost much more.

The GSR is more than a 1911 story. It ushers in a new period and a new paradigm at SIGARMS, a time when an increasingly Americanized company has now taken a major step away from the European designers at Sauer and Hammerli who once defined what SIG would sell in the United States. This SIG is sweet, but it isn't Sauer.

Yes, GSR stands for **G**ranite **S**eries **R**ail. But in its effective and startling new interpretation of John Browning's classic design, it could also stand for

**Grand SIG Retro.** And, in terms of the company's fast-changing identity, it may also be the first shot in the **Great SIGARMS Revolution.**



*A stream of .45 hardball brass arcs over Matt McLearn's head as he rapid-fires the SIGARMS GSR.*



*GSR's action is extremely smooth. It can easily be worked from the front even without forward slide serrations.*

## Chapter 13



### *Manipulation of the Pistol*



**F**ans of the brand like to say, “SIG stands for Simple Is Good.” There is truth in that. One reason so many police departments chose the SIG-Sauer when the time came to switch from revolvers to autos was its F relative ease of training.

What had roughly a century of policing with the double action revolver taught cops they needed to know about combat handguns? How to load and unload, both in conditions of calm and under stress at high speed. How to fire both single-action and double-action. How to cock and decock. How to take the gun apart was a topic that was *not* taught in police classes, because it was perceived, correctly, that any operator who hadn’t spent at least a

week at a factory-sponsored armorer's school might not be able to disassemble one and put it back together perfectly.

What needs to be taught to a new operator with the SIG-Sauer semiautomatic pistol? Well, see if this sounds familiar. There's how to load and unload, both in conditions of calm and under stress at high speed. How to fire both single-action and double-action. How to cock and decock, and frankly, you can leave out the "cocking" part because that will take place during the loading process. How to disassemble and reassemble the gun is a proper topic for the operator of a SIG-Sauer, because its mechanism is actually so much simpler than a revolver's that it can be taught to anyone competent enough to fire it.

Before we go on, it is important to make the distinction between *administrative* handling and *combat* handling, as the terms have been distinguished in law enforcement training. Administrative handling encompasses routine loading and unloading, checking, and assembly/disassembly. Combat handling is practice for what would likely take place in an actual gunfight. It includes shooting, speed reloading, tactical reloading, and drawing and holstering. Firing is actually treated separately from handling per se.

## **Administrative Handling**

LOADING typically begins with the slide closed on an empty chamber and no magazine in the pistol. Always hold the grip-frame in the dominant hand, and always allow the non-dominant hand ("support hand") to perform support functions such as loading. This prevents over-handling, switching the gun back and forth between hands, and other manipulations that can cause people to fumble or lose track of where the gun's muzzle is pointed.



***Checking empty by feel. With frame of pistol in dominant hand, little finger of free hand probes the magazine well...***

With the SIG's frame in the firing hand, held in a firing position except for the trigger finger being outside of and away from the trigger guard, and in a firm grasp, take hold of the loaded magazine with the support hand. The strongest way to hold the magazine is with its floorplate, the bottom part, at the palm of the hand, and the middle finger and thumb supporting the sides of the magazine with the index finger up along the front and just under the nose of the topmost live cartridge.

Insert the magazine with its flat back making contact with the flat back of the magazine well inside the grip-frame. Insert firmly until you hear and feel the magazine click securely into place. The pistol is now in what is called "Condition Two," with loaded magazine in place but firing chamber still empty.

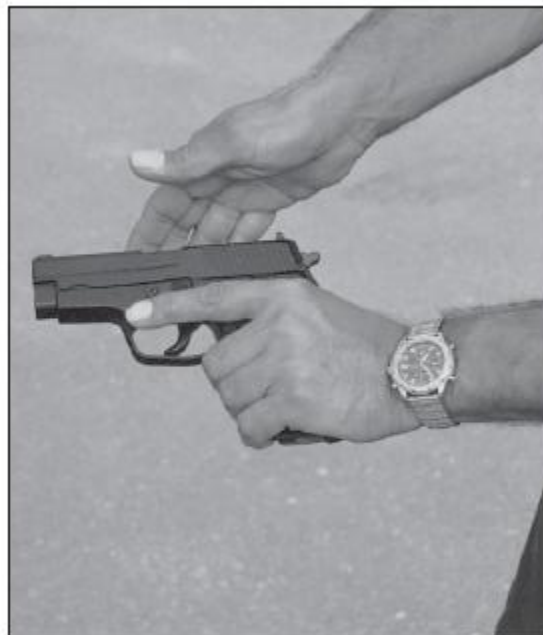
Since all SIG-Sauer pistols are "drop-safe," i.e., safe from accidental discharge due to inertia firing if the gun is struck or dropped, it is mechanically safe to chamber a round, which means to put a live cartridge in the firing chamber.

If the SIG's slide was locked to its rearward position before the loading process began, the slide can be closed either by pressing down on the slide release, or by tugging it to the rear and letting go. In either case, the slide will fly forward under the pressure of the recoil spring, which rides on a guide rod beneath the gun's barrel. Always let the slide snap forward on a live magazine with full force. This guarantees that the cartridge goes all the way into the firing chamber. Keeping a grip on the slide as it comes forward

is a no-no called “riding the slide.” You don’t want to do it because it may keep the cartridge from chambering all the way. Just release the slide with either a downward press on the slide lock lever or a tug on the rear of the slide and let it snap forward full force. This is how the pistol was designed to be operated.

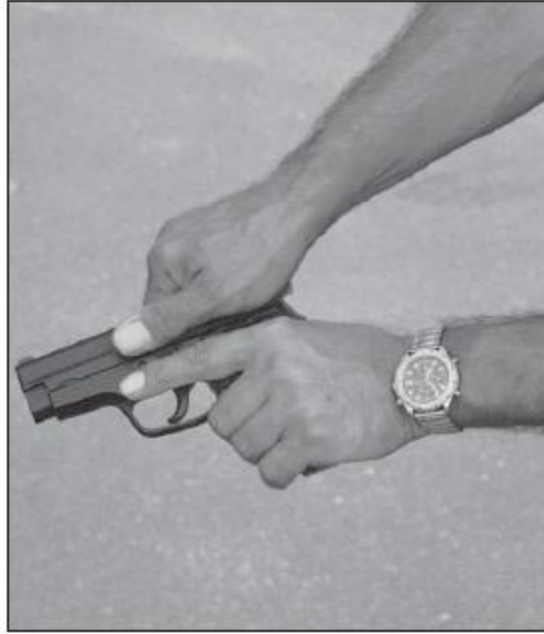


*... and then index finger probes firing chamber to make sure all is clear. Pistol is P228.*



*Administrative slide-lock for SIG-Sauer by lefties. Dominant left hand holds grip-frame, while support hand comes in Israeli-style...*





*... shooter takes Israeli grasp, carefully placing right thumb parallel to ejection port on left side of slide...*



*... and retracts slide. Right thumb is now perfectly positioned...*



***... to pull slide lock lever up and lock slide of empty pistol open.***

The pistol is now fully loaded, cocked, and ready to fire. Since this is administrative loading, not combat loading, it is presumed that we don't need to fire the gun at this exact moment. Therefore, in the interest of safety, we immediately decock the gun. This is done by pressing straight down on the decocking lever, located behind the trigger on the left side of the SIG-Sauer's frame. You will feel a release, and will see the hammer and trigger both come forward. A safety shelf has stopped the hammer. This automatic hammer lowering process is the only way to safely decock the gun! Despite well-intentioned but bad advice based on old, obsolete designs, you should *never* lower the hammer of a SIG-Sauer or any similar pistol by holding the hammer and pulling the trigger! First, this creates a great opportunity for human error. If the hand slips, and the trigger is being held back, the gun can and probably will discharge. Second, this ill-advised maneuver prevents the pistol's hammer from taking its proper position vis-à-vis the safety shelf, and the gun is no longer drop safe. **ALWAYS DECOCK YOUR SIG-SAUER BY USING THE DECOCKING LEVER, THE WAY IT WAS DESIGNED TO BE USED.**



***Right handed shooter's manipulation of slide release lever. After inserting magazine as shown...***



***... or left thumb, depending on which is faster, more natural, and more positive for the individual shooter...***

At this point, administrative loading is now complete.

UNLOADING means, by definition, that we are handling a loaded firearm which may be cocked. Always keep that in mind, and take due care. Make certain that the muzzle stays in a safe direction at all times. This is another good reason to get in the habit of always using the dominant hand to hold the gun, and the support hand to perform functions such as these.



*...shooter can depress slide lock lever with either right thumb...*



*...but in any case applying straight down pressure on the lever until the slide snaps forward, chambering the topmost round from the magazine.*



*Author recommends decocking with the firing hand, because the support hand may not always be available for the task. Right handed, it is done thus...*



*...making sure the movement is completed, bringing hammer safely down and trigger safely forward.*

*Left-handed decocking of SIG-Sauer. Flex index finger, place tip on decock lever, and push straight down toward butt of gun. Note how finger is flexed at distal joint to put more sectional density in direction of pressure...*



*... giving ample leverage to decock the gun properly.*



Before unloading, make sure that the hammer is down and the trigger is forward, in double-action mode. While this is not mechanically necessary to

the unloading process, it is one more safety step to reduce the danger of an unintentional discharge. It is axiomatic that a cocked pistol with a short, light trigger pull can be fired more easily than an uncocked pistol in double-action mode with a long, heavy trigger pull.

To unload, first remove the magazine. On most SIG-Sauers, this means pressing the magazine release button located on the frame behind the trigger guard, but on some models – the P230 and P232, and the early P220 style with the European release – there will be a lever at the rear of the butt. Push this lever rearward with the support hand's thumb, as the long, strong middle finger of that hand curls over the lip of the magazine at the front of the butt and pulls the magazine completely out. Just pushing a button or a lever will not do it. You'll need to actually pull the magazine out if there is a butt-heel release, and if a cartridge has ridden forward a little at the top of the magazine, this may be true even for the SIG (or any other semiautomatic pistol) with a push-button mag release. A cartridge that has ridden forward between the feed lips will drag its bullet nose on the inside front of the frame, creating friction which may keep the magazine from falling free on its own.

Once the magazine is out of the pistol, *put the magazine away* before going any farther. You'll have your hands full, literally, as you clear the chamber. Holding the pistol steady against strong physical pressure as the slide is manipulated is an important job, and it is wise to completely dedicate the dominant hand to it. Pulling the slide firmly back against the recoil spring without deviating the muzzle of a still-loaded gun is an important job, too, and it is just as wise to totally dedicate the support hand to performing that function.

This is why the magazine should be put away before manipulating the slide to unload the chambered round. Do NOT attempt to keep the magazine in either hand. The old military doctrine of putting the removed magazine into the little finger of the firing hand goes back to a time of "cold ranges," where the pistol was only loaded when there was about to be a "fire" command, and only unloaded when all shots in it had been fired. It may have been considered safe in the old days to hold an empty magazine in the little finger of the hand grasping the gun when the chamber was certain to be empty, but it is a very dangerous habit to get into when you are going to be unloading live ammunition from a still-loaded firearm.

Once the magazine has been removed, it is time to immediately clear the remaining live cartridge out of the firing chamber. With the muzzle in a safe direction, use the support hand to retract the slide all the way back. The cartridge should now tumble out of the ejection port, or fall down through the now-empty magazine well.

DO NOT attempt to eject a live cartridge through the ejection port and into the palm of your hand! This technique goes back to before WWII. At that time, the predominant semiautomatic pistols in the Western world were the Colt 1911 .45 auto and the P-35 9mm. Both were constructed with short ejectors that were virtually incapable of hitting a cartridge primer during this maneuver. However, the technique is manifestly unsafe with modern semiautomatic pistols – the SIG as well as the Beretta, the Glock, the Ruger, the Smith & Wesson, and even many contemporary 1911 style pistols. The reason is that these guns all have long ejectors to more effectively kick empty shell casings out through the ejection port as the pistol cycles. It is possible, particularly if the slide of a dirty or unlubricated pistol sticks a little during the attempt to retract, for the slide to come back in such a way that the head of the cartridge comes toward the ejector. If the ejector hits the exposed primer hard enough, the result can be an out-of-chamber discharge.

Normally, the ordnance steel of the chamber contains a cartridge's pressure as the powder burns. Outside the chamber, the cartridge literally explodes, and if the palm of the hand is over the ejection port, it takes the brunt of the blast. The result can be profound nerve damage to the hand.

Incompetent unloading techniques have led to accidental shootings, usually of the "I didn't know it was loaded" variety. Some of these were fatal. If the unloading is done out of sequence – "clear the chamber, remove the magazine" – the stage has been set for disaster. If the magazine is in place when the slide is drawn back to clear the round out of the chamber, as soon as the handler lets go of the slide it goes forward and chambers another live cartridge off the top of the magazine. If the handler takes the round out of the chamber and then removes the magazine, he has in fact left a live round in the launch tube.

With this in mind, always complete an administrative unload with the following ritual. Put away the removed magazine and the cartridge removed from the chamber. Then, as carefully as you would with a loaded gun, draw

the slide rearward and lock it open. Peer carefully into the chamber to make certain that it is empty, and into the magazine well to make sure that a magazine is no longer in place. Get into the habit of holding the pistol in the dominant hand (in firing position, muzzle in a safe direction) as the little finger of the non-dominant hand, normally the narrowest of the ten digits, actually probes the firing chamber and the magazine well to confirm that both are empty.

Once the gun has been unloaded, don't leave it lying around unattended. In a training environment, you can put it back in the holster. There it will at once be available and secure from unauthorized hands. Or, it can be locked away in a vehicle, a locker, or a safe.

## Slide Manipulation

For many shooters, the operating of the slide is the hard part of routine handgun manipulation. The slide is held closed or "in battery" by the strong recoil spring beneath the barrel. There is also the matter of the mainspring in the grip-frame, which is holding the hammer down and at rest when the gun is in battery in double-action mode. The firm push necessary to operate the slide can be difficult for anyone who has any limitations in upper limb strength.



***Overhand method of slide operation is known as "American style" or "saddle style." Grasp is seen here from the weak side...***

Certain emergency techniques, such as working the slide when you only have one hand to work with, will be dealt with later in this chapter. The manipulations under discussion in this particular chapter require two hands.



The dominant hand holds the grip-frame, and the support hand retracts the slide.

There are two basic techniques for doing this, each of which has advantages and disadvantages. Let's examine both, along with their pros and cons.

The *U.S. Method*, which draws its name from having been taught to American soldiers virtually since the adoption of the semiautomatic pistol in 1911, has also been called the "overhand" technique. Officer survival expert Dave Spaulding dubbed it the "saddle" method, because the hand sits astride the slide like a person astride a saddle. In this technique, the dominant hand holds the grip-frame; the support hand grasps the slide palm down, with the thumb pointing toward the shooter, and pulls the slide backward in the direction of the shooter's shoulder.

Many longtime shooters were originally trained in this technique, or self-taught shooters learned it from gun magazines and TV or movie screens. The *U.S. Method* can be very fast, particularly when drawing a pistol which does not have a round in the chamber. In the latter situation, U.S. military personnel were taught for generations to thrust the gun hand forward to the target as the slide-operating hand snapped toward the gun arm's shoulder. This allowed an extremely fast draw-to-the-shot of a pistol that was in Condition Two, that is, with a loaded magazine but empty chamber.



***...and here from the strong side. Forearm is always kept perpendicular to slide at 90 degree angle, muzzle downrange, finger on frame. To activate...***



*...draw slide all the way back...*



*... then let it slam forward on its own power...*



***... and, if you're not going to instantly fire, decock the pistol. Instructor Steve Denney demonstrates with P220 American.***

However, Spaulding and other professionals before him identified problems with this technique. Since it involves a “hand-against-hand” movement, it requires upper body strength and is therefore sometimes less than optimal for those with limited strength. One shortcoming, which is irrelevant when the shooter uses a SIG, is that if the pistol has a slide-mounted safety and/or decocking lever, this movement can inadvertently on-safe or decock the pistol.

There is another concern with this technique no matter what pistol it is employed with. Human beings instinctively tend to align their skeletal support structure in the direction in which they are exerting force. Thus, if attention is momentarily diverted, the shooter can end up bringing his elbow dangerously near the muzzle while performing this slide movement. For the same reason, a right-handed shooter may unintentionally point his muzzle to his left while doing this. (A southpaw may do the same thing, with the muzzle pointing to the right.) This is why many instructors suggest the student take a step back with the leg on their gun hand side before operating the slide. It keeps the muzzle downrange if either of those mistakes is made.

The *Israeli Method* is called that because Israeli firearms instructors have been teaching it for decades. It is also known as the “slingshot method” because it shares some biomechanics with the way that instrument is operated. In this technique, the dominant hand, as always, takes a firm hold on the grip-frame of the pistol with the trigger finger on the frame above the trigger guard. The support hand grasps the slide firmly, with the thumb pointed *away from* the shooter.



***Slingshot method, also known as “Israeli style” operation of slide. All four fingers grasp weak hand side of slide, with dominant hand holding grip-frame...***

When properly executed, the Israeli method is extremely strong, fast, and natural. It works as well on a SIG as on anything else, but it is particularly advantageous with those other makes of pistol that have slide-mounted safety/decock levers. Its biomechanics are such that the thumb on one side of the slide and the index finger on the other tend to hold the slide-mounted safety lever where it is. In other words, if the pistol is off-safe when this movement begins, it will remain off-safe when the slide operation is completed. If it is on-safe when the manipulation starts, it will be on-safe when the manipulation is completed.

With the Israeli Method, the muzzle always seems to stay downrange and never stray to either side or toward the elbow of the slide-manipulating hand. Some instructors prefer to teach this technique combined with a slight tilt of the top of the slide toward the weak-hand side, and some even turn the gun upside down while performing the maneuver. The latter is what you would want to do if you were trying to eject a casing or live round from the chamber. With the pistol upside down, gravity is working with you to help clear out the chamber. By operating the slide the same way all the time, the theory goes, no harm is done in administrative loading and the shooter learns to do one technique properly all the time.



*...and entire thumb, from drumstick to thumbprint, holding slide on strong hand side...*



*...allowing shooter to use whole body strength with turn of hips to rack slide all the way back until it stops...*



*...allowing it to snap forward by itself to chamber the round positively...*



*... and then shooter can fire instantly as shown, or if that is not necessary, decock.*



*Tara Miller shows other petite females how to easily operate the slide. Here she takes the Israeli grasp on her P245 ...*





***...and digs in her right foot, driving right hip and gun hand forward as left shoulder and arm pull back...***

To perform the Israeli or slingshot technique correctly, care must be taken with two things. First, the support hand should not just lightly grasp the slide with thumb and forefinger. It should take a very firm grip. If you are a right-handed shooter, you hold the SIG's grip-frame in your right hand as your left hand came down with the thumb on the right side of the slide and the fingers on the left side. The thumb would press firmly in contact to the slide all the way from the base of the "drumstick" to the tip of the thumb; all four fingers would likewise take a firm hold.

Second, the Israeli technique allows the shooter to use the power of his or her whole body in the slide operation. The movement looks like a karate practitioner performing a reverse punch. The heel of the strong side leg digs into the ground or floor as the shooter straightens that leg, turning the hip on the gun side forward. This in turn drives the gun arm very strongly forward. Simultaneously, the firmly grasping support hand pulls the slide to

the rear. As with the overhand method, the slingshot method is complete when the slide reaches the rear extreme of its movement. The support hand lets go, allowing the slide to snap forward and chamber a round. The pistol is then decocked if shooting is not to take place instantly.



*...allowing her to easily retract slide, even starting with hammer down...*





*... by simply releasing support hand grasp, she allows slide to fly forward and chamber a.45 round...*

Either of the above methods is safe if the shooter keeps the muzzle downrange and does not allow any body parts to approach the “business end” of the pistol. It has been this writer’s experience over decades of teaching the handgun that the slingshot is the safest technique, and in many ways the more efficient.

## **Helpful Hints**

Some pistols have very strong recoil springs. Remember, too, that in a conventional pistol such as the SIG-Sauer, the shooter is also working against a hammer that is held forward by a very strong mainspring which runs vertically down the back of the grip-frame. Many shooters do not have as much upper body strength as they might like. When all these factors are

taken into account, it is not surprising that some shooters have difficulty operating the slide of a semiautomatic pistol.



***...and, after decocking and going to low ready position, she's good to go.***

One way to make the job easier is to cock the hammer first. This is best done by holding the pistol firmly by the grip-frame in the dominant hand, and bringing the hammer back with the support hand. In a firing stance, this is generally done by applying the thumb of the supporting hand to the spur of the hammer. In administrative handling, the easiest way to do this is with the lower edge of the support hand, the part of the hand that would be the striking surface in a *shuto* or “karate chop.” The movement resembles a cowboy actor “fanning” the hammer of an old-fashioned single-action revolver, though of course it is not done as a strike. The hand should touch, and then push the hammer back for maximum control.

This relieves all the pressure of the mainspring that the hammer has been applying against the slide while forward. With the hammer now back instead of forward, it will be much easier to draw the slide to the rear.

For maximum leverage, the shooter has two excellent techniques to choose from. One is the Israeli Method, done as described above: the body performing a karate-ka's forward punch from the ground up while drawing the slide to the rear. The other is a variation of the U.S. or "saddle" technique that has been attributed to former national speed shooting champion Mike Plaxco. The shooter, keeping the muzzle firmly downrange and trigger finger completely clear of the guard, pulls the gun in tight to the rib cage under the breast or pectoral muscle on the dominant hand side. The support hand grasps the slide firmly in the "saddle" grasp. Now, again, the "forward punch" element is added. The shooter digs in the rear heel on the gun hand side, driving hip and body forward toward the gun while the support hand holds the slide fixed in place so that the frame and barrel can push forward beneath it. As always, when the slide reaches its rearmost point of movement, the shooter should let go so that it can snap forward with full power to guarantee that a cartridge is properly chambered.



***Cocking hammer with heel of support hand as shown relieves mainspring pressure, allows slide to be much more easily retracted.***



***Tara demonstrates alternate technique for less strong people who prefer American style slide manipulation. Grasp as shown, forearm across chest and safely 90 degrees to gun muzzle...***



***...digging in rear heel and driving gun side hip forward, she pushes pistol against firmly holding hand until frame comes forward under slide...***





*...and releases, letting round chamber. She will then decock. This technique was developed by world speed shooting champion Mike Plaxco.*

## **Locking The Slide Open**

Not counting the slide locking itself back on an empty magazines, there are three ways to get the SIG-Sauer pistol opened up with the slide locked back and the magazine out, the condition it which it should be for inspection to confirm that it is unloaded. Note: only with an empty magazine can you lock back the slide of the blowback .380s, the P230 and P232, since neither has an external slide stop/slide release lever.

Option One: Hold the pistol in the right hand with the muzzle in a safe direction. Without allowing any part of the support hand or arm to get in front of the muzzle, and without letting the muzzle turn in an unsafe direction, draw the slide to the rear with the left hand while the right hand thumb pushes upward on the slide stop lever.

Option Two: Hold the pistol in the right hand with the muzzle in a safe direction. Place the left hand on the slide with the thumb pointing forward on the right side of the slide, and the index finger level with the front of the ejection port. As the slide is drawn to the rear by the left hand, the left index finger will find itself in proximity to the slide stop lever. Pull this upward with the tip of the left index finger, and the pistol will be locked open.

Option Three: (For left-handers) Hold the pistol in the left hand with the muzzle in a safe direction. Place the right hand on the slide with the right thumb on the left side, pointing forward, and level with the ejection port. Draw the slide back. The right thumb should now be in proximity to the slide stop, in position to pull that lever up and lock the slide open.

## **Easing The Slide Forward When The Pistol Is Empty**

You do not want to store any semiautomatic pistol for a long time with the slide locked to the rear. This will put great, sustained pressure on the fully compressed recoil spring, which will soon take a set and lose tension prematurely. When the gun is stored, the slide should be forward and the hammer should be down in the double action position.

Once the gun has been checked and confirmed unloaded, you don't want to close the slide by letting it fly forward. The mechanism was designed to be cushioned by the resistance of a cartridge that is being stripped from the top of the magazine. Without that, the slide slams forward in a way that can damage the extractor and, on some other guns, can also ruin the sear.

Therefore, you want to hold the grip-frame firmly in the dominant hand and use the non-dominant hand to ease the slide forward. You can tug the locked-open slide to the rear, which will release the slide lock, and then hold it as it comes slowly forward with the support hand. If the shooter is holding the grip-frame in the right hand, he or she can also use the right thumb to release the slide stop while the left hand eases the firmly held slide forward.

If the gun is held with the grip-frame in the left hand, it is not wise to attempt to twist the left thumb around behind the gun to activate the slide stop. This weakens the primary grasp on the pistol. In that situation, just

hold the grip-frame firmly with the left hand, and use the right hand to release the slide and let it come forward, as delineated above in Option Three.



*Firearms instructor Frank Cornwall demonstrates chamber check on P220...*

## Chamber Check

It's easy enough to check if the *magazine* of your pistol is loaded. Simply withdraw the magazine and examine it. Checking the chamber is a more difficult, dexterity-intensive task.

Do *not* reach up under the pistol and grasp the slide from underneath to push it back. The hand is now in too close proximity to the “business end” of a presumably loaded pistol. If the hand slips, you can shoot a finger off. Firearms instructor John Farnam recently reported the case of a man who shot two fingers off his own support hand while attempting to check his gun with this ill-advised technique. When he slipped, the gun discharged, costing him a finger. He was so shocked and startled that his hand



convulsed, inadvertently pulling the trigger a second time...and shooting off the second finger.



***...seen here in close-up. At no time has hand approached “business end” of the loaded .45.***

There are other, better options. One is the *armorer’s grasp*. The dominant hand takes its conventional hold on the grip frame, with all fingers completely clear of the trigger guard and the muzzle in a safe direction. The support hand stabilizes the frame at the dust cover area, just ahead of the trigger guard. Now, the firing hand pivots upward at the juncture of the web of that hand and the grip tang area, bringing the fingers of the firing hand up over the slide. Index and middle fingers squeeze; this contraction brings the slide slightly back, exposing the firing chamber. Depending on size, shape, and flexibility of the hand, the shooter can use the ring finger or little finger of the dominant hand to check the chamber by feel.

A still better method is seen in Andy Stanford’s book, *Surgical Speed Shooting*, and demonstrated here by noted firearms instructor Frank Cornwall. With the trigger finger safely extended on the frame, retract the slide as in the Israeli method. While holding the slide just slightly out of battery, use the tip of the index finger to probe through the top of the now partially open firing chamber.



*Steve Denney demonstrates LFI draw from under an open-front concealing garment.*

## **Emergency Techniques**

The SIG-Sauer pistol is a defensive handgun. It is intended to be emergency rescue equipment in a life-threatening crisis. As such, it must be operated swiftly and surely. We hope never to need the fire extinguisher or the lifeboat, but we drill in their use. The same is true of the defensive handgun. We hope never to need it, but we know that if we do ever need it, we shall need it badly indeed.



***Both hands move. Support hand comes to centerline of body –edge out so it can ward off a close-range grab – as gun hand’s fingertips all touch body centerline...***



*...Gun hand now tracks immediately toward gun. With fingertips touching torso, bottom edge of hand automatically clears his Outback vest away from his holster...*



*...gun hand takes firm firing hold on grip-frame with every digit but trigger finger, which is rigid outside the holster...*



*...and Steve executes “rock and lock,” pulling gun up out of holster and snapping muzzle toward target as soon as it clears. Meanwhile, support*

*hand is in position...*



*...to come in from behind muzzle and take its place. Gun is already on target, and can be fired from here if necessary...*



***...as Steve completes the draw by extending his P220 .45 into firing position. Note that finger is off the trigger; in the real world, most draws will end in “gunpoint” instead of shooting.***

The separate chapter on shooting the SIG-Sauer is geared entirely toward its use under extreme stress. Adjunct skills will be addressed here. These include getting the gun out of the holster and into the fight in time to interdict a deadly threat; reloading if the emergency is so grave that the defender has emptied the gun and not yet resolved the crisis; tactical reloading after the shooting is over; and emergency manipulations that may be required if the user is wounded or otherwise injured.

## **The Draw**

If we knew an armed attack was coming, the SIG we'd want in our hands would be their 550 rifle. The handgun is a reactive, defensive weapon, sufficiently compact to have always available to defend against surprise

attacks. This means that the wearer needs to practice quickly deploying it in emergency situations. Going on the assumption that any officer wearing a pistol in uniform has police academy and in-service departmental training geared to the officer's specific uniform holster, we'll focus on bringing the lawfully concealed handgun to bear.

Lets start with a few rules.

- ***Don't practice the draw to the shot more than 1/10<sup>th</sup> of the time.*** Cop or citizen, most of the time you draw you'll be holding someone at gunpoint, not shooting him. If you condition yourself to reflexively fire as you complete the draw, that conditioning could result in tragedy and imprisonment.
- ***Start slow.*** With any physical skill, we should crawl before we walk, and walk before we run. The best way to learn to do anything swiftly is to start practicing it slowly. This programs the mind and body to get every nuance down correctly. As world combat pistol champ Ray Chapman always said, "Smoothness is five-sixths of speed."
- ***Finger off the trigger.*** Never let your trigger finger enter the trigger guard until the pistol is on target and you have formulated the immediate intent to shoot that target.
- ***Control the muzzle.*** Do not let the muzzle cross any part of your body during the draw. Practice to a high skill level with a dummy gun or unloaded gun before attempting these techniques with live ammunition in the weapon.

The draw breaks down into two key components, *access* and *presentation*. Access means getting the firing hand onto the gun properly. That tends to be the tough, dexterity-intensive part. The next step, presentation, is bringing the gun from the holster to the target. This tends to be easier, since it is more of a simple gross motor skill.

Illustrated here are the strong-side draw from under an open garment and shoulder-holster draw, neither of which should require both hands. Also demonstrated is the draw from beneath a closed-front garment, which can be done one-handed but is much more effective when both hands are employed. The illustrations and captions should be self-explanatory.





***Steve Denney will demonstrate the most effective draw from beneath a closed-front garment, the proven “Hackathorn Rip.”***



***Free hand goes to hem of anorak in appendix area, takes firm hold...***





*... and rips up toward shoulder to expose pistol, as gun hand begins reach. Garment may not reach shoulder, but attempting to get it there guarantees sufficient clearance for a draw...*



*...gun hand now takes firm firing hold with all but trigger finger, which is straight outside the holster. Free hand continues to hold garment clear...*



*... and as gun hand “rocks and locks,” support hand is naturally positioned to join it in two-hand grasp. Gun is already toward the threat...*



*...and gun is thrust toward target. Note that finger remains “in register” on frame unless intention to fire immediately has been formulated.*



***If support arm is disabled or otherwise occupied, draw from under closed front garment may have to be accomplished one-handed. Steve Denney demonstrates LFI technique, using SIG P220 .45 in Sidearmor holster.***



***Extended thumb of gun hand tracks up leg along trouser seam or common peroneal nerve, and digs under hem of garment...***



*...lifting it as shown here in close up...*



*...gun hand takes drawing grasp...*



*... being right handed, Steve now rocks his hips to the left, to give gun more range of movement with which to clear. He draws the SIG...*



*...with more of a “bowling ball” motion than we’d usually want, to make sure it does not snag on fabric. If now available, support hand meets*

*firing hand...*



*...and he is ready to engage, two-handed if possible, one-handed if necessary.*





***Support arm rises in Najiola-style karate block, not only to ward off close-range attack but also to clear the arm from the muzzle's path. Elbow should be shoulder high as gun hand knifes through what would be opening in concealing garment...***



***Shoulder holster draw is demonstrated by Jeff Williams with .357 SIG P229 in Mitch Rosen Stylemaster rig.***

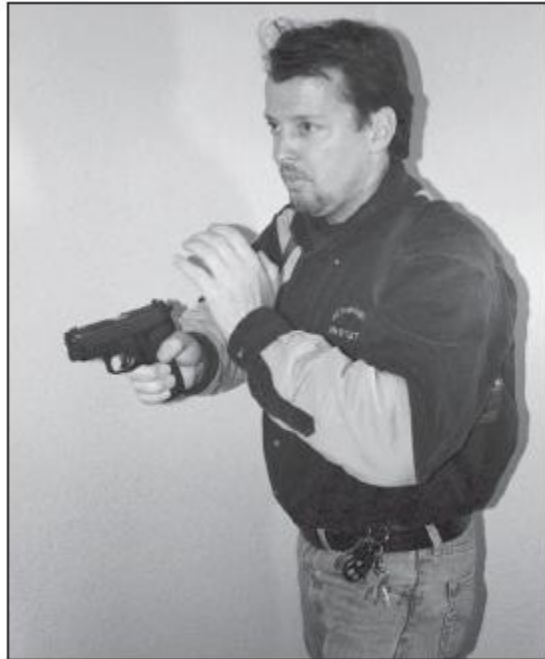


*...and takes drawing grasp. Thumb breaks safety strap. Trigger finger is “in register” outside holster...*



*...the P229 is rocked straight out across chest. Note that holster-side hip is turned slightly toward target...*

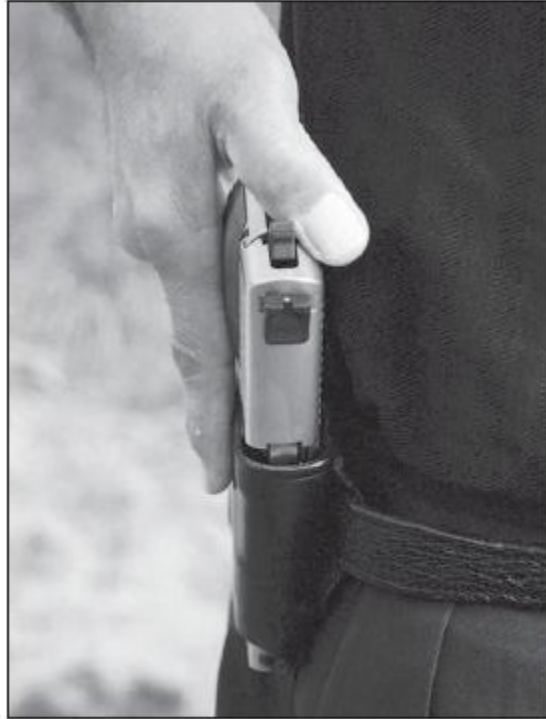




*...and gun is quickly on target, too. As gun hand thrusts forward, support hand can now safely come in from above and behind gun muzzle...*



*... to fashion a strong two-handed stance.*



***REMINDER ON SAFE HOLSTERING. Author inserts P220 ST .45 into Don Hume beltslide holster. Note trigger finger straight and outside holster, thumb contacting both slide and hammer. Latter technique...***

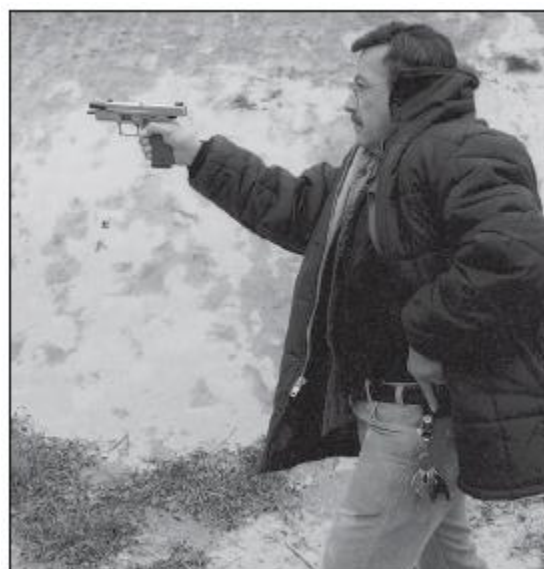
## **Speed Reload**

The speed reload is sometimes called the “emergency reload.” We can’t quibble with the semantics. If you are in a situation that has required you to fire every round in your SIG pistol, and you’re still under attack and need to fire more, “emergency” may be an understatement.

In the speed reload, the magazine is empty and the slide has locked back. Jeff Cooper credits the standard protocol illustrated here to Ray Chapman. However, to the best of my knowledge, the grasp of the magazine with the baseplate in the palm and the index finger up under the topmost cartridge nose is actually Jeff’s idea.



*...insures that tight-fitting holster doesn't push the SIG's slide out of battery. Hammer is kept down, and anything that interdicts trigger will cause rise of hammer that can be stopped by thumb, and which will signal shooter to stop the holstering process.*

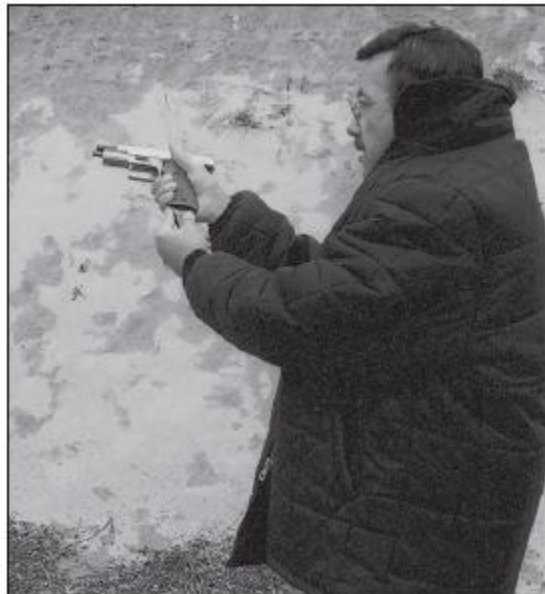


*Author demonstrates right-handed speed reload of SIG-Sauer. P220 ST is at slide lock. Support hand drops to mag pouch and seizes spare*

*magazine...*



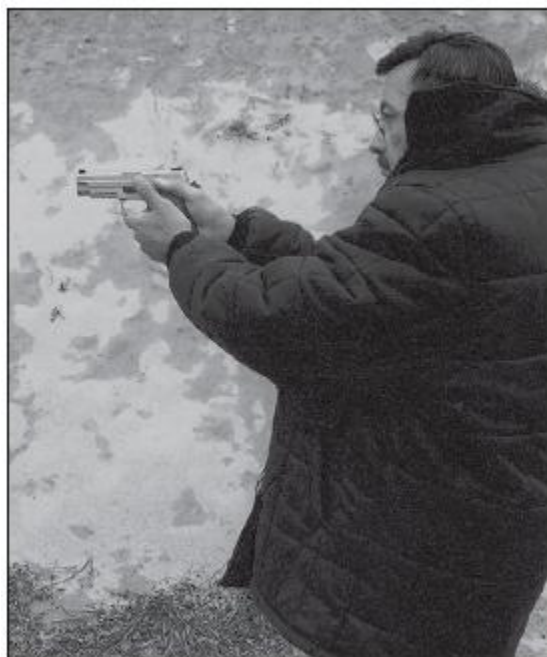
*...right thumb punches release button to drop empty magazine (seen falling past hem of coat) as support hand brings the fresh magazine up...*



*...guided by index finger, beginning with flat back of magazine against back of magazine well opening, it is inserted...*



*...and slapped home by palm of hand...*



*...and reload completed as right thumb drops slide lock lever, chambering a round, while simultaneously the support hand resumes firing position. Yes, it is that simple.*



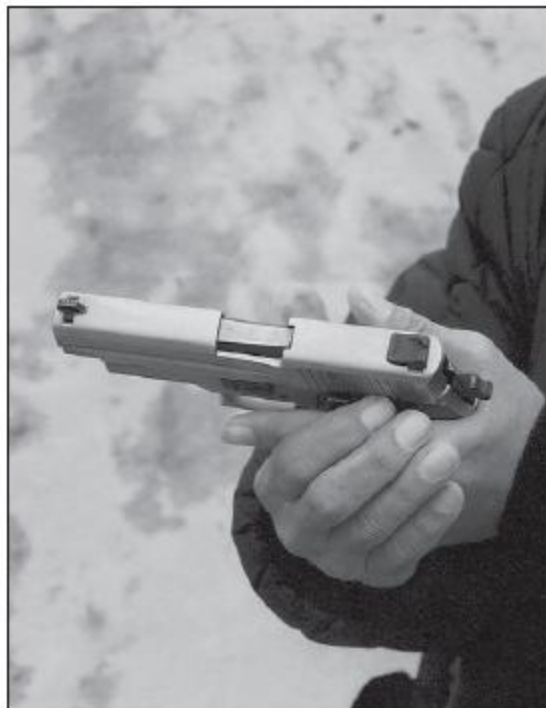
*For the left-handed shooter... With SIG .45 at slide lock, trigger finger activates the magazine release button as free hand goes for spare mag...*



*...magazine insertion is accomplished...*



*... as magazine is slammed home, right hand continues upward movement, with fingers in “spear hand” configuration crossing up over back of firing hand behind knuckles. This brings fingertips to slide stop area...*





***...and with simultaneous flexion of all four fingertips, one fingertip hits slide stop and chambers a round...***



***...and right hand pivots back into support grasp for firing. If this does not work after serious practice, revert to slower but simpler “slide tug” method to chamber the round.***

Again, the illustrations are self-explanatory, but a few points bear emphasis. First, a right-handed shooter who insists on firing the SIG-Sauer with a high-thumb hold may have disabled his own slide lock lever, allowing the slide to fall on an empty chamber. In this case, the reload will be an insertion of the magazine and a brisk racking of the slide to recharge the chamber.

Second, most shooters are significantly faster and even more positive using the slide release lever to drop the slide forward instead of making a separate tugging movement on the slide itself. If, however, *you* find that working the lever is difficult for *you* under stress, revert to the slide tug. (You will have to use that method anyway with a P230 or P232, since those models do not have slide lock/slide release levers.)

Third, most SIG-Sauer pistols have a reversible magazine release. It makes sense for southpaws to take advantage of this and put the release button on the right side of the frame. The reason is the button is better



protected when it's toward the body while holstered. I know some performance-oriented shooters who've moved the button to the same side as their dominant hand because they find it faster to dump the mag with their trigger finger than with their thumb. I understand their point, but on a defense gun, leaving the button to the outside invites bumps that can accidentally dislodge the magazine.

## **Tactical Reloads**

There are several different methods of rapidly retrieving a partial magazine from your pistol while inserting a full one. The theory of the tactical reload is that even when you think everything is over, it's a good idea to have a fully loaded magazine in your gun just in case your optimism was premature. It's also not a good idea to throw away perfectly good ammunition when you're still at a danger scene, and the tactical reload preserves that ammo.

Off the top of my head, I can think of at least five different tactical reload sequences, each of which has its strong adherents. It's at least a six-beer argument in the bar after the shooting session once the guns are locked away. For details on the various techniques, reference *The Gun Digest Book of Combat Handgunnery, Fifth Edition* . For now, we'll focus on the single technique that has proven most adaptable to the greatest number of combinations of hand, gun, and magazine sizes and shapes. It was developed by Col. Jeff Cooper, and is still taught today as the standard technique at Gunsite Training Center, Thunder Ranch, and some other schools.



***Tactical reload begins with pistol magazine still partially loaded, round chambered, and hammer cocked if your SIG is the most common TDA variety.***



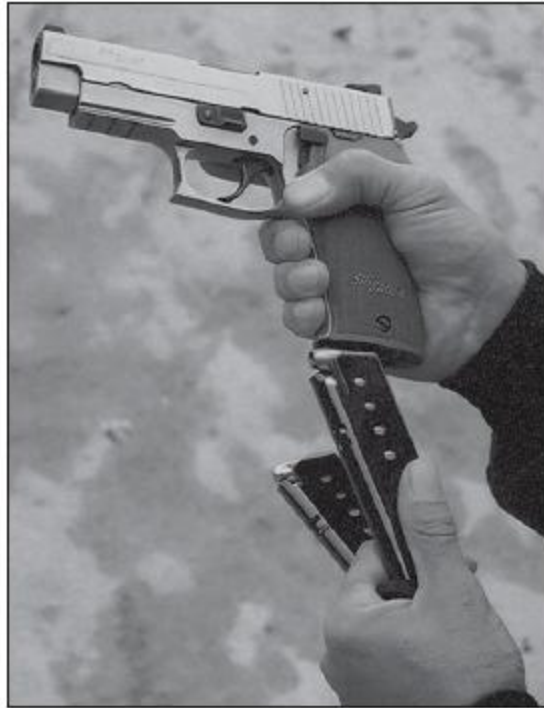
***Finger is removed from trigger guard and hammer decocked as support hand begins its descent to the magazine pouch...***



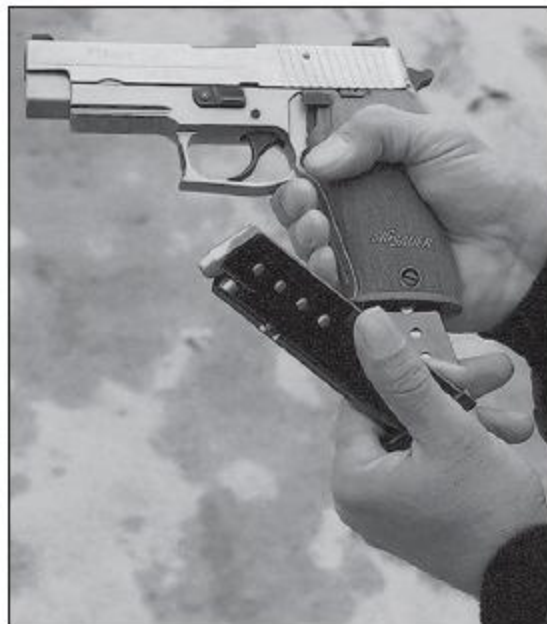
***...support hand brings up fresh magazine exactly as it would for a speed reload...***



***...but as it approaches pistol, index finger slides from magazine and toward thumb, leaving fresh mag between middle finger and index finger and creating a “pincer” between thumb and index finger...***



*...partly depleted magazine is removed by index finger and thumb...*



*...and hand rotates slightly to align the full magazine with the gun butt. Magazine is now inserted...*



*...and slapped home by support hand, which now has three fingers free...*



*... to take a reasonably effective two-hand firing hold without “changing channels” and dropping magazine, should need to fire return at this point...*



*...and the partial magazine is now placed in pocket, waistband, or location of shooter's preference.*



***Slightly extended SIG magazine release from Langdon Tactical Technologies enhanced positive speed of reloading when tested by author, and did not seem to increase likelihood of unintentional magazine release, as is the case with some other such parts.***

In a speed reload, there is no need to decock a double-action or engage the safety of a single-action auto, because you are attempting to sustain fire as fast as possible. The tactical reload, however, is to be done during the proverbial “lull in the action,” and it is a fumble-prone technique. For both reasons, it is important to *take your finger out of the trigger guard* of any pistol before you begin, and to *decock your double-action or engage the safety of your single-action* before you begin.



***Here is the proper magazine grasp during any kind of reload. Floorplate is in contact with palm for maximum insertion strength. Index finger is in position to guide magazine into gun. Thumb and middle finger, the two strongest digits on the hand, take firm grasp.***

When you are done, put the partial magazine where it will be accessible, but where you won't mix it up with a full magazine. If you only carry one spare magazine and pouch, put it back in the pouch; with the only other magazine being the full one in the gun, there is nothing to mix it up with. Many shooters put it in a pocket, but beware of two problems. First, when you need those last precious rounds, you are probably not habituated to reaching for them in a pocket. Second, we tend to practice shooting while standing up on the range in casual BDU pants with capacious pockets. When we need this technique for real, we might be wearing a tailored uniform or tailored suit, and be kneeling or crouching with trouser fabric drawn taut. This could make it impossible for us to access the pocket. My preferred option is to simply shove the retrieved magazine into the



waistband, but each practitioner needs to know what works for him or her, and practice accordingly.

## **Wounded Officer Techniques**

I've always used the term "wounded officer" because I started teaching cops long before I trained civilians, and got stuck in the groove. The fact is, any good person in a gunfight needs to realize that their first indication that they're up against a really skilled bad guy may be when they take a bullet or catch a knife thrust. They need to be prepared to keep fighting with the body parts that still work and finish the fight.

***Author demonstrates returning fire from "down on weak side" position. Shooter can fire one-handed (fastest first shot)...***



***...two-handed extended (best control for rapid fire)...***



*...or with down elbow braced for single high-precision shot. Pistol is P226 9mm, scene is an LFI-II class in the Rockies.*



You can shoot a pistol with your weak hand or strong hand, right-side-up or upside-down and hanging from the chandelier, and anywhere in between. The key thing is successfully is to at least dry-fire from every conceivable position so your mind and body know how to do it. No, you may not have the accuracy or recoil control you'd have from an ideal, fully "enabled" position, but you can get the job done. It's important to have a plan ready to go when it happens, and dry-fire practice "programs your computer" for that.



***Since you can't get your body weight into the gun when you're down, recoil will seem enhanced.***

*Be extremely careful live-firing these techniques. A lot of downed officer positions can disorient the shooter and increase the chance of his gun muzzle crossing another good guy on the practice range. Take particular care when shooting from low on-the-ground positions that the angle is not such that your bullet will go over the backstop and escape the range. It is recommended that these techniques be practiced with live ammunition only under close and competent supervision.*

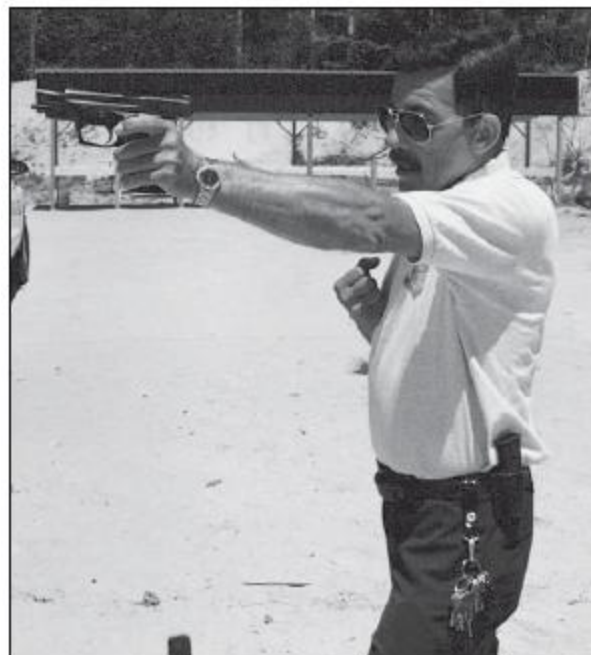


***When face down with head toward an opponent, slapping the ground with your weak hand palm will give you the elevation you need to engage him.***



*Author uses P226 to demonstrate weak hand only reload. P226 starts with slide locked back...*

*...index finger hits magazine release, and mag is seen to fall past shooter's knee...*





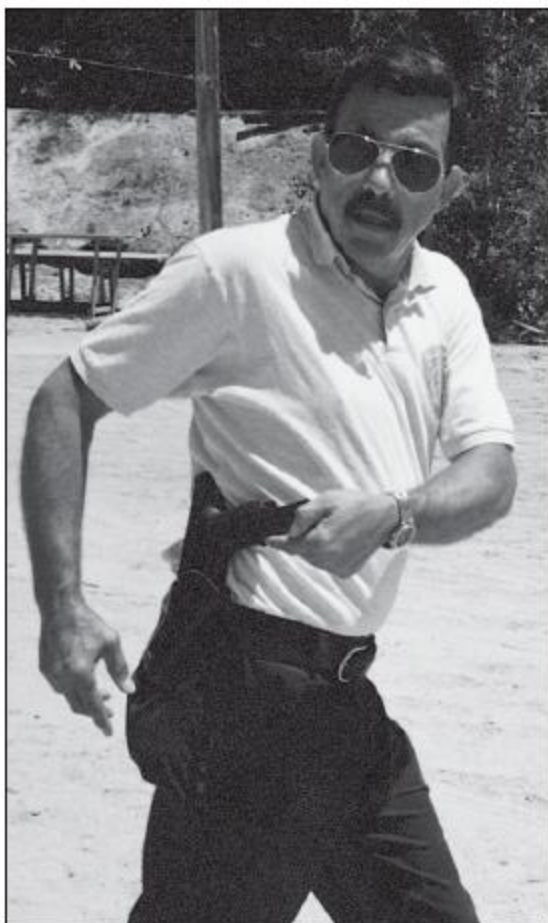
*...pistol is inserted into Ted Blocker DA-2holster butt-forward...*



*... fresh magazine is accessed...*

*...and inserted...*



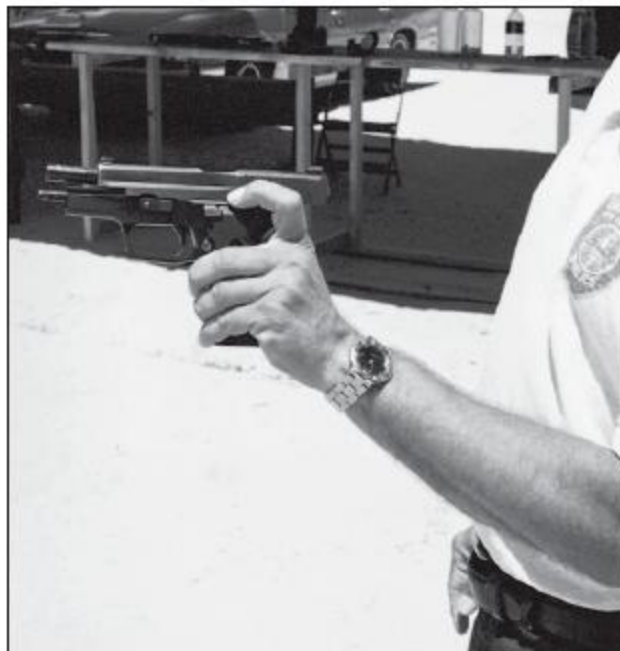
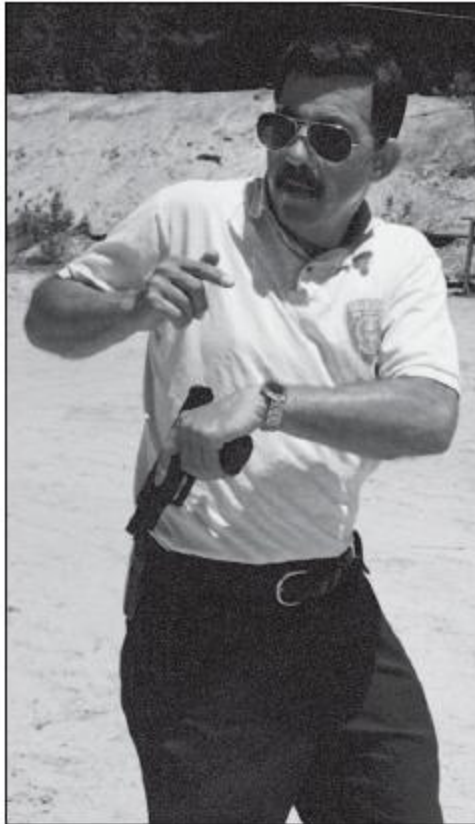


*...and locked in as shown. Thumb locks over backstrap of grip frame, palm over floorplate of magazine...*



*... and closed with a crush of the hand to ensure seating. Now...*

*...pistol is drawn cross-draw...*



*... and slide can be closed with trigger finger pressing straight down on slide release lever, as author prefers...*

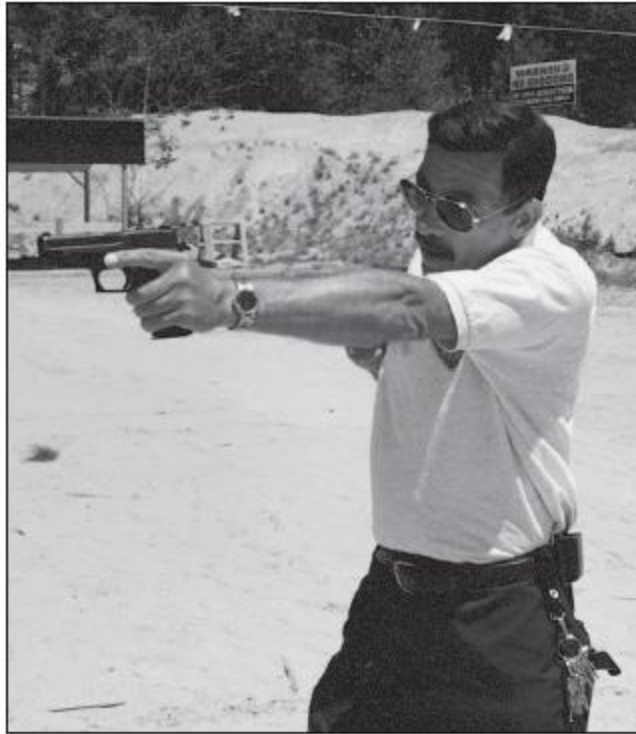




*...or with thumb as some others like, though author finds it a bit unstable...*

*... or by catching sight against belt and thrusting forward and away from you, a variation of the “tug” method of slide release...*





*...and the shooter is now ready to get back to work.*

Many of these positions make it difficult for the shooter to get a locked wrist behind the gun. This has been known to jam many semiautomatic pistols. Fortunately for the SIG-Sauer shooter, this brand is not particularly sensitive to weak wrists, though any autoloader can jam if held loosely enough.



*Practice shooting from downed positions...*



*...on either side, and prone and supine...*



*...two-handed and one-handed...*



*... and you too will be able to shoot as well from disadvantaged positions as this SIG-carrying LFI-II student.*



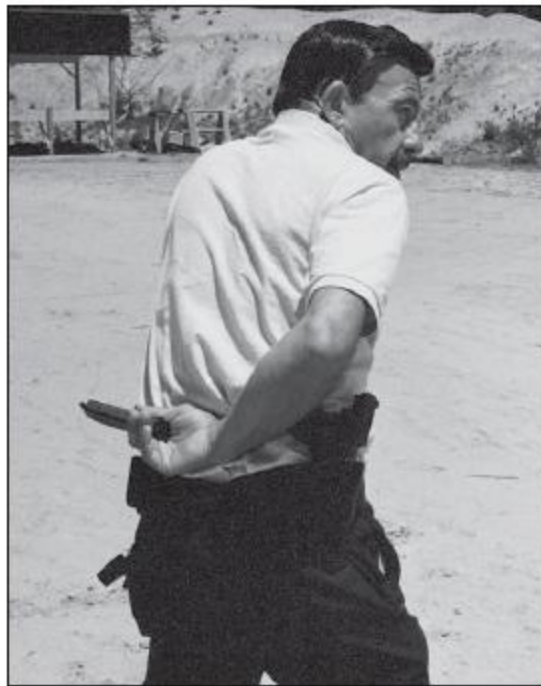
*Author demonstrates his preferred one-hand-only reload on strong-hand side. P226 is at slide lock. Thumb hits release button, and empty mag drops ...*



*...then shoved securely home. Hand is now free...*



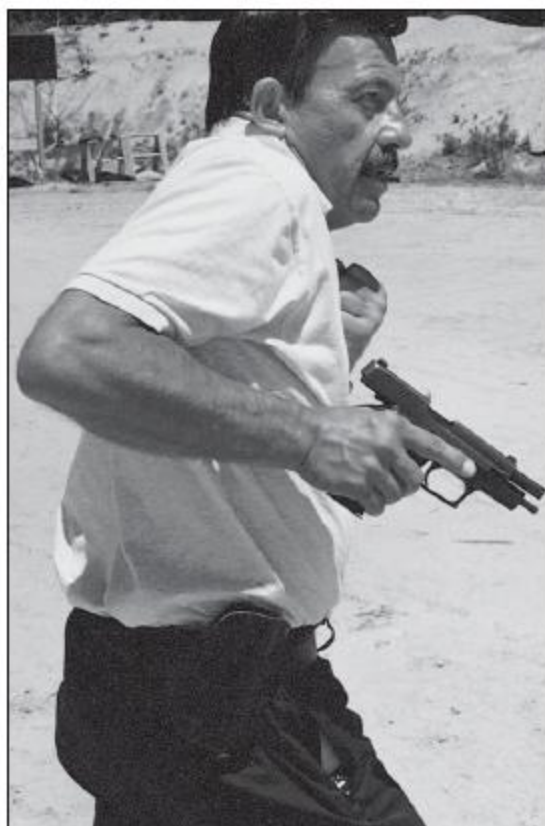
*...gun is thrust into holster on this particular angle, because slide is locked back...*



*...to reach around front and grab spare from duty belt, or around back as shown and grab spare mag from concealment pouch...*

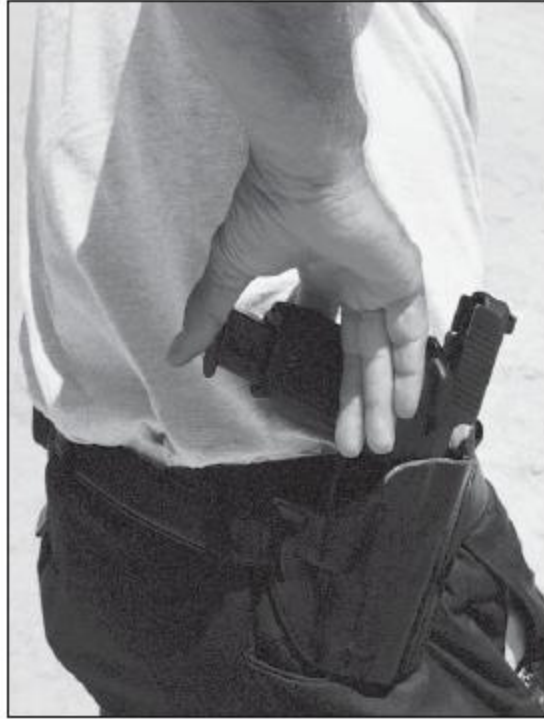


*...insert into butt of holstered gun...*

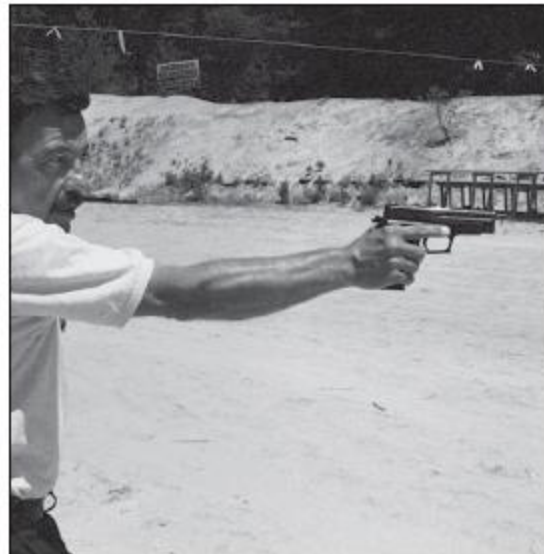


*...gun is now drawn in conventional manner...*





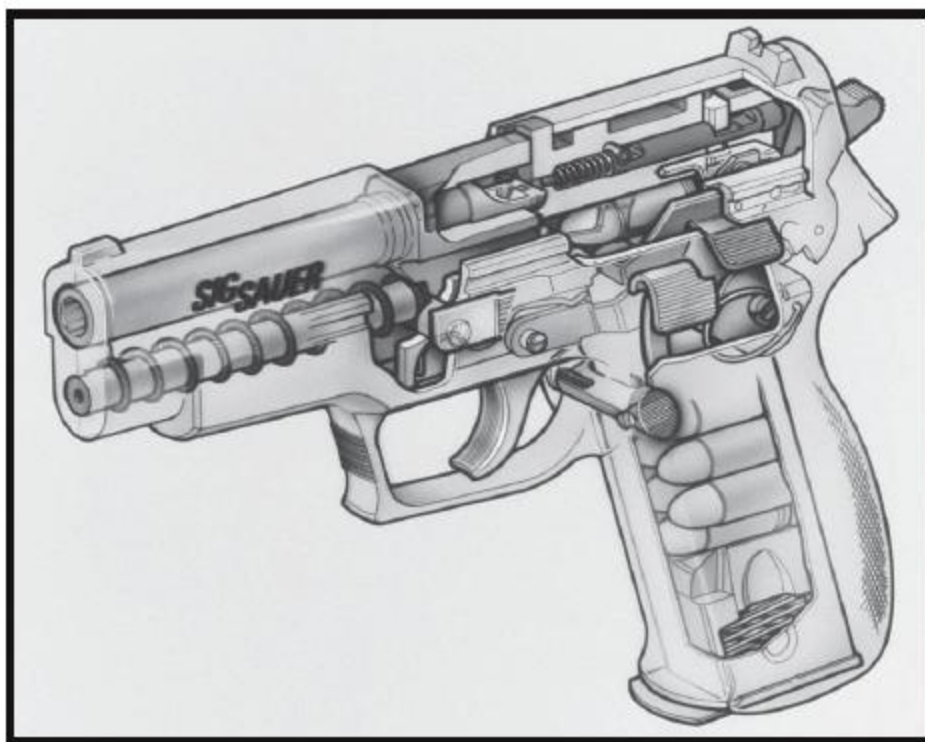
*... using index and middle fingers as pincers to stabilize locked-back gun in holster that no longer fits properly, thumb makes certain magazine is seated...*



*...and thumb hits slide lock release lever, putting shooter “back in business.”*



*When down on your side, whichever elbow is nearest the ground can be flexed and “planted.” Accuracy is increased, but at the expense of recoil control.*





## Chapter 14



### *Shooting the SIG-Sauer Pistol*



**T**he SIG-Sauer models are all accurate pistols. However, it is axiomatic that handguns are the most difficult firearms to shoot. The gun's inherent performance potential is one thing, but the shooter's actual performance lies mostly with himself. It's the driver, not the car, which wins the race.

Administrative handling is touched upon in an earlier chapter. Here, we'll address live fire techniques that have been proven to give the shooter faster, more accurate delivery of pistol fire. This will not be a reprise of the author's books *StressFire* or *The Gun Digest Book of Combat Handgunnery, Fifth Edition*, both of which go into shooting techniques with far greater

depth. Rather, we'll simply touch on key elements of good, effective, safe practical shooting, with emphasis on how these elements may apply to the SIG-Sauer pistol.

## Grasp

The grasp is the key interface between shooter and pistol. A target shooter may be able to get away with a light hold, but a combat gun will be rocked by the substantial recoil of powerful defense ammunition and needs to be held firmly. A target pistol with a 2-pound trigger pull may allow the shooter to get away with little grasping pressure. Not so a double-action pistol whose trigger pull weight on the first shot may be as much as 12 pounds. *That* task demands a firm hold or the pull itself can jerk the gun muzzle off target when the shot must be fired quickly.

Instructors agree on basic placement of the gun in the primary hand, but tend to debate such subtleties as thumb placement. There is consensus that the web of the hand should be high on the gun, pressed firmly against the bottom edge of the grip tang. This lowers the muzzle axis vis-à-vis the wrist axis as much as possible. This is good thing for several reasons. The high-hand grasp gives the gun less leverage with which to jump upon recoil. It helps keep trigger finger pressure coming straight back instead of relatively downward, where it could jerk a shot low. It also gives the slide a firm abutment against which to cycle, minimizing the chance of a malfunction. I like to grasp the pistol high enough that a little ripple of flesh shores up against the grip tang near the web of the hand.

The primary hand has basically four thumb placement options. The *vertical thumb* hold has this digit pointed straight up. I see nothing good whatsoever coming of this, only a weak hold and a thumb placement that can bind the slide, especially with a large or gloved hand. When I ask its proponents why they push the vertical thumb hold, the answer I always get back is, "High thumbs equal high scores." Sorry, that's a bumper sticker slogan, not a biomechanical explanation.

*High thumb* is a holdover from the old days of the 1911 pistol's renaissance. Back in the 1950s and 1960s, aftermarket gun parts makers had not yet figured out that the shelf of that gun's thumb safety needed to be curved. Otherwise, the middle knuckle of the thumb could hit the bottom

edge and knock the lever back up into the “safe” position during a firing sequence. It became doctrine to “ride” the thumb safety with the shooting thumb to keep this from happening. This had some negative side effects, then and now. The thumb is placed where if it is large or gloved, it can contact the slide and bind it, jamming the gun. This hold also pulls the web of the hand away from the 1911’s grip safety, which can cause the gun to fail to fire unless it has a correctly shaped grip safety as on the GSR 1911 pistol by SIGARMS.



*Grasp options include “vertical thumb” hold, which author doesn’t care for...*



*... “straight thumb,” the hold favored by most current combat pistol champs...*



*...”high thumb,” which is contraindicated because it deactivates the SIG’s slide stop lever...*



*... and “low thumb,” particularly useful for one handed shooting.*



***Putting free hand's index finger on trigger guard does not work well with SIGs; the glove-compatible "winter trigger guard" extends too far forward for that finger to gain a solid hold.***

*Straight thumb* grasp is the choice of most of the top modern shooters at the upper levels of competition. With the thumb pointing to the target, the index finger can pull back in a straighter line. It's something archers figured out before shooters did: the forward-pointing thumb aligns the skeleto-muscular support structure behind it in an advantageous way.

*Low thumb*, with the thumb curled – bent at the median joint, tip of thumb pulling downward – is seen by some as old-fashioned, but it remains the strongest grasp. It is particularly suitable for one-handed shooting, because of its added strength.



***This strong wrap-around hold is the easiest two-hand grasp to learn, and very effective.***

Right-handed shooters must be aware that HIGH-THUMB, VERTICAL-THUMB, OR STRAIGHT-THUMB GRASP CAN CAUSE THAT DIGIT TO RIDE A SIG-SAUER'S SLIDE STOP LEVER, DEACTIVATING IT. THIS MEANS THAT THE SLIDE CAN NO LONGER LOCK OPEN ON AN EMPTY MAGAZINE AS IT WAS DESIGNED TO DO. This will not occur with the left-handed shooter.

Some pistolsmiths, like Ernest Langdon, have attempted to cure this with a custom slide lock lever for the SIG-Sauer which has a smaller shelf. It has met with limited success at this writing. A high thumb can still over-ride the slide stop, and the smaller dimension only makes it more difficult to activate the slide stop.



***Author's preferred grasp of SIG. With no safety on slide to unlock, he likes to take advantage of the greater strength of the locked down thumb position, placing trigger finger on trigger at palmar surface of distal joint.***

The simplest cure for this problem is to simply use the low thumb position. If that's not in the cards, use the straight-thumb grasp for two-handed shooting and adopt the "LE", or "Leatham/Enos" hold. Rob Leatham and Brian Enos, two of our most successful practical shooters, place the firing hand's straight thumb atop the support hand and out of contact with the pistol. Their support thumb is also pointed downrange toward the target.

## **Stance**

Foot placement and body position create the "gun platform." You can be completely off balance and still shoot accurately, if you go slowly enough, but if you want the speed essential to defensive shooting, you need to get your whole body into the shooting technique.

The various stances are best taken collectively as parts of a system, rather than focusing on one to the exclusion of the others. Each has biomechanical advantages over the others in some situations, and a shooter with only one

stance is like a fighter with only one punch: he won't last too long in the arena when everything starts moving and angles are constantly changing.



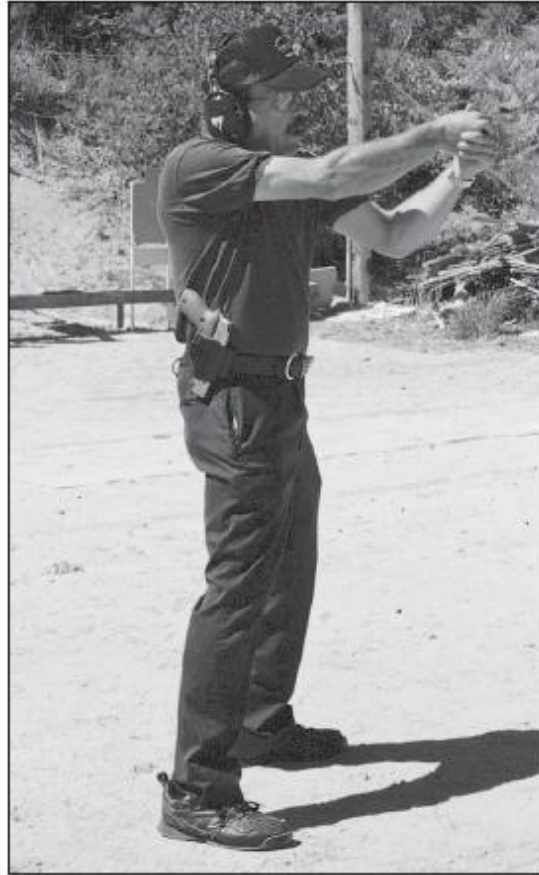
***Primary grasp is foundation of two-hand grasp. If shooter prefers thumb curled down...***

The simplest and in many ways the strongest two-handed shooting stance is the *Isosceles*, but only when properly executed. So-called because both arms lock out and form an Isosceles triangle based across the chest, this stance must be executed with the upper body forward of the hips. Competitors who favor this style like to say, "Nose over toes." This writer has had the best luck with the extremely aggressive Isosceles stance developed in the StressFire <sup>TM</sup> system. The rear leg digs into the ground hard with its knee just off a full lock, and the forward leg flexes distinctly to take the majority of body weight.



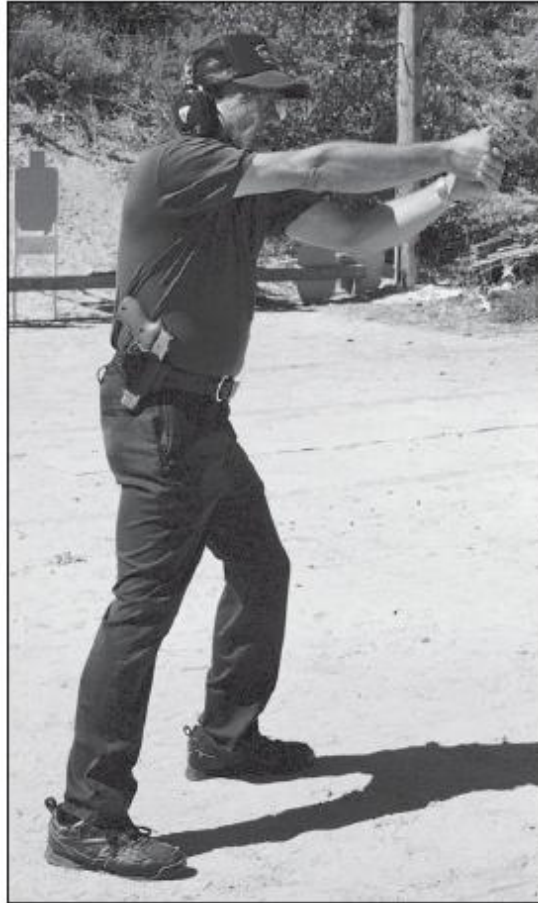
***...doing the same with support hand, "thumb print over thumb nail," will work. Note that little of left hand actually touches gun. Doesn't much matter: strength of grasp is reinforcing right hand's grasp.***





***Author shows students the difference between classic Weaver and Chapman stances. In Weaver, both elbows are bent, with isometric push/pull, and stance will survive neutral or even rearward leaning torso position...***

In Isosceles, the gun is at body center so it doesn't matter which foot is forward. The wide adaptability of foot position gives Isosceles the greatest range for swinging between different targets or threats at widely divergent angles, and the NYPD Firearms and Tactics Unit coined the term "turret stance" to describe this shooting posture, which they have taught and used successfully for decades. Even with feet parallel, the shooter can stay balanced if the knees are bent and the upper body is forward. Because the chest is square to the identified threat, this is the ideal stance to use when wearing body armor. The gun's placement at body center makes the Isosceles the ideal stance for the cross-dominant shooter (i.e., right handed with left master eye) and the most natural for darkness situations where the sights are not visible.



*...while with Chapman's modified Weaver, gun arm is locked straight out and shoulder must be at least slightly forward.*



*Ayoob demonstrates proper Isosceles with .45 hardball in a P220. Gun is still on target, but two spent casings in air show how quickly and recently*

*the shots were fired. Note aggressive forward body posture. Grasp is a “wedge hold.”*



*A strong interpretation of Isosceles is the choice of most modern practical shooting aces, like Todd Green, shown here at 2003 Midwinter IDPA Championships with SIG P220 .45.*

Downsides? While probably the most effective stance for pivoting toward your strong-hand side if you can't move your feet, Isosceles may give the least range of movement when pivoting toward your weak side. Some shooters are too muscular to use it without the muscles binding, and the same can happen with very tight shirts or coats and with some types of body armor and load-bearing vests. Requiring extended arms, it can be torture for shooters with elbow problems. If the shooter keeps the torso straight up without forward lean, recoil control will be severely dissipated, and if the shooter leans back instead of forward, muzzle jump will go completely out of control.

The classic *Weaver* stance, popularized by Jeff Cooper and his colleague and inspiration Jack Weaver, uses isometric tension where Isosceles uses body weight and skeletal support structure. Best suited for those with good muscle tone and particularly good for those with great muscle strength, the true Weaver requires both elbows to be bent to some degree. The firing hand pushes forward and the support hand pulls back, with equal and opposite pressure. The tense, bent arms act as shock absorbers, flexing slightly at the

wrists and noticeably at the elbows. This shock absorption effect allows the classic Weaver, alone among two-handed firing stances, to survive awkward positions in which the shoulders are back instead of forward, and is particularly suitable to shooting while moving. The feet need to be in a boxer's stance, weak side forward; if foot positions are reversed, the body binds at the hips and the lower back.

Because the body can generally turn more effectively to its weak side than its strong hand side, the bent arms of the Weaver afford great range of movement turning to the weak side, making it the stance choice in that situation. Conversely, it will be the poorest stance from which to pivot at the hips to fire toward the strong side if the feet cannot move. Tending to turn the body somewhat edgewise toward the target, the original Weaver stance compromises your protection when wearing body armor, which is of necessity partially cut away at the upper side of the torso to allow arm movement.



***This tilt of the gun is one way to line up the sights for right handed, left eye dominant shooter who prefers Weaver stance. Demonstrated by Wes Doss at SIGARMS Academy range.***

Other shortcomings: The classic Weaver has poor adaptability to the cross dominant shooter, who must either tilt the gun sideways to align the sights with the dominant eye, or drop the head toward the gun-side shoulder, an awkward position which also compromises the ability to scan for danger. It does not work well for people of limited muscle mass, strength, and tone. It is a more complicated stance than Isosceles, more dexterity intensive, and more difficult to learn and teach. It requires extensive practice if it is to work in the dark without visible gun sights.



***Aggressive use of Chapman stance allows petite Tara Miller extremely good control of her high powered SIG P239.***

The *Chapman* stance, sometimes called a modified Weaver, employs the boxer's stance but with the gun arm locked straight toward the target, and the forward arm flexed and pulling the gun arm back into the strong-side shoulder socket. Very compatible with long gun firing techniques, this posture's straight shooting arm brings the chest more forward and more effectively utilizes the shooter's body armor than does the original Weaver. Adaptation to the cross dominant shooter is easier, too. Simply bring the chin to the gun arm's bicep to align the sights with the opposite eye.

This stance, developed by world champion Ray Chapman, has few downsides. One is that, like Isosceles, it is greatly compromised if the shooter leans the shoulder back instead of forward. Another is that it doesn't offer as much range of movement to the weak hand side as the classic Weaver, nor to the strong hand side as the Isosceles.

For one-handed shooting, I use exclusively the “punch” techniques of the StressFire system. The gun arm is locked straight out; the free hand curled up into a fist (preferably palm up for greater sympathetic upper body strength) in the region of the pectoral muscle, and the upper body is aggressively forward. Body weight is supported by a flexed forward leg, and body mass is driven forward by a slightly flexed rear leg or “drive leg” with its heel driven hard to the ground.



***This LFI student demonstrates splendid control of his SIG with StressFire “punch” one-handed technique.***

***This Leatham/Enos grasp works very well, and applies pressure from drumstick of support hand to grip panel. If firing hand thumb is placed on support hand instead of frame, it won’t over-ride this SIG P239’s slide stop. Many shoot their best with this grasp.***





Avoid the street punk “gangsta” technique commonly seen in the movies in which the pistol is turned over flat on its side. Recoil control is poor and sighting is difficult. By turning the pistol somewhere between 15 and 45 degrees inward toward the weak hand side, however, gripping strength can be slightly increased. This variation was developed for precision match target shooting by the great Marine shooting champion Bill McMillan, and adapted and popularized by combat pistol champ Ray Chapman. Such great instructors as Clint Smith teach it today as their one-handed technique of choice.

Try this stance holding the gun straight up and with the “McMillan tilt,” and see which works better for you. The tilt brings the gun’s sights directly in line with the non-dominant eye, making it the choice for cross dominant shooters. I tell my students to feel free to mix and match; many shoot one-hand-only with the McMillan on their non- dominant eye side and the sights straight up on their dominant eye side. It is important, of course, for the shooter to be well practiced with using either hand in one-hand-only firing.

## **Non-Standing Positions**

The *roll-over prone* position developed by Ray Chapman is the strongest of shooting postures. The body rests on the earth, rolled onto the strong side of the torso with the weak side leg flexed up at the knee so a taut thigh holds everything in position without muscle tension. Be certain to let the heel of the support hand touch the ground for stability. Digging the butt of the extended magazine into the ground, contrary to popular myth, will help rather than harm accuracy. Try it yourself and see. (Don't do that if your pistol is has the European style butt heel release, however; recoil can move the latch of the pistol when the butt is in contact with the ground, causing an unintended dropping of the magazine.)



***This shooter drills a 10-yard target easily from the cover crouch with his SIG-Sauer.***

There are numerous *kneeling* positions from which to choose. The traditional marksman's kneeling rifle position can adapt to the handgun, with the lower inside edge of the upper arm against the front of the knee. Don't try to go "joint on joint" with ball of elbow on the kneecap; this will cause wobble, not stability. At high speed, there often won't be time to get the elbow to the knee, and in any case that position brings the torso so far



forward that breathing is compromised, as is vision through corrective eyeglasses. Elbow at knee also severely limits range of movement in terms of height and particularly in terms of the ability to traverse against running or multiple targets. Simply get a knee on the ground, keep the torso upright, and use an appropriate Weaver, Chapman, or Isosceles from the waist up if you want your shooting from the kneeling position to be fast as well as accurate.

For “high kneeling” as with shooting over a patrol car hood, you want to be down on the gun side knee only, with the other leg’s knee up and foot flat. This will give you maximum balance. A high kneeling position on both knees positions the femurs as parallel vertical sticks, compromising balance and steadiness. If the target is at 12 o’clock and you are right handed, go down with the right knee on the ground pointing toward 2 o’clock and the left foot down flat, its toe pointing to 11 o’clock. For southpaws, reverse and put the left knee down, positioning the left knee toward 10 o’clock and the right foot toward 1 o’clock.

For low kneeling, keep the same stance and “rock back on your haunch,” sitting on the strong side calf, or put both knees down and drop your buttocks. Be sure to flex at the waist to bring upper body weight forward to help to control recoil.

The *cover crouch* of StressFire is an alternative to kneeling. It is faster than going to kneeling, in terms of both getting into position and getting out of it to move to a safer location. It is also safer when the shooter may be on dangerous ground such as rocks, broken glass, punji stakes, or a rice paddy filled with *e coli* from “night soil” fertilizer. Unlike the skeletal support based “rice paddy squat” of the rifleman, this position is more similar to a martial artist’s horse stance. The feet are wide, the knees are flexed deeply, the butt is low (at least knee level), and both feet are flat on the ground with upper body weight suspended equally between the two tense lower limbs. Not the most stable shooting technique, it is fast and safe and gets you to the same height as a high kneeling position.



*Firearms instructor Wes Doss demonstrates marksman's kneeling position with SIG .45.*



### ***Cover crouch...***

*Barricade shooting*, or firing in proximity to cover, can be handled in different ways. Some advise getting back away from the cover. The problem with this is twofold. First is the geometric problem: the farther you are back from the barricade, the easier you are to outflank. Second, it is less stable. Third, under stress you can hit your cover instead of your opponent. Not only does your cover now become your opponent's, but if it is something like a boulder or a steel beam, your own bullets could bounce back hard enough to take out an eye or knock you unconscious. Stay back from the walls, by all means, when *searching*, but when under fire it may actually make more sense to get closer to your protective barricade.



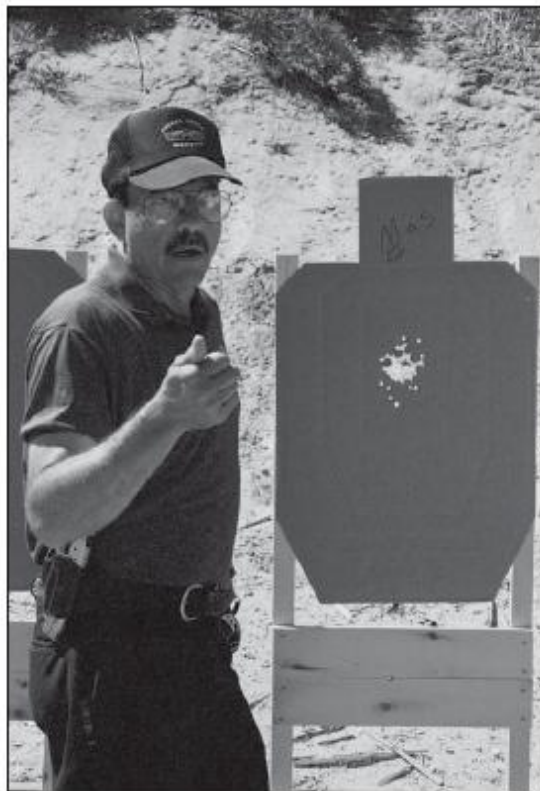
*...high kneeling...*



*...and low kneeling may each have a place when behind low cover, depending on height of cover, angles of fire, and other circumstances.*



*In barricade shooting, take care that your pistol's slide does not actually contact the cover, or friction bind can jam the gun.*



*Using techniques explained in this chapter, Ayoob has just shot this 60-round timed qualification target in front of his students to demonstrate.*

### ***Pistol is P220 ST.***

There is nothing unique to the SIG-Sauer to consider here. With any auto pistol, make sure that the slide is not in direct contact with the barricade, or it can bind and jam the pistol. Your shooting posture will very likely end up being what the situation dictates when you need your SIG for real. The more familiarity you have with firing from the different positions, the more tools you'll have in your toolbag and the better a job you'll do.

Whichever your favorite shooting style may turn out to be, you'll always be able to apply to it the advice that countless students have learned from ace instructor George Harris at SIGARMS. "The three tenets to successful shooting are balance, mobility, and stability," according to Harris. "You must always balance the body, be mobile and therefore always able to improve your position, and stabilize the muzzle on the target. The trigger is always controlled in both directions when justified in shooting. The index finger never loses contact with the trigger. When fitting the pistol to the shooting hand, the muzzle should point naturally to where the eye is looking."[\(1\)](#)

***DA to SA trigger transition is simple. Place distal joint of the finger on the trigger. Pull straight back and break the double-action shot...***



*...and, changing neither grasp nor finger placement, let the trigger come forward to stop and fire again in single-action. Yes, it is that simple. Pistol is P220 American.*

## **Advancing The Basics**

Don't focus so much on the fine points of style that you forget the basics. The finger should stay in contact with the trigger throughout the firing sequence, because if it comes off and then has to return, it strikes with impact. This is the often warned against "trigger slap" that pulls the muzzle off target. Some instructors will tell you to "catch the link" or "ride the link," meaning to let the trigger come just far enough forward from the previous shot to reset the sear. This can work in experienced hands in a shooting match, but tends to fall apart under pressure. It is a rare person who can actually do it in the heat of a life-threatening fight. Under stress, strength goes out of control and dexterity goes down the toilet. Flexor muscles being stronger than extensor muscles, it is highly likely that in a "fight or flight" situation the finger will be unable to feel the catching of the link and will fail to return the trigger sufficiently to reset it for the next shot. This could be disastrous. The defensive shooter is better served to allow the trigger to return all the way forward until it moves no more, without actually removing the finger from the trigger.

SIG-Sauers come in two variations, traditional double-action (TDA) and double-action-only (DAO). The first double-action shot may require 10 or more pounds of pressure, though probably no more than seven with the DAK variation, but that's still a lot more than the weight of the gun. This means that the pistol must be held steadily and firmly throughout the trigger pressure. It also means that the shooter will benefit greatly from the maximum leverage he or she can exert against the trigger.





***Shooter will be strongest if gun's fit to hand allows barrel to be in line with center of forearm with wrist locked. If hand is too small or trigger reach too far...***



***...shooter is forced into this weak “h-grip,” with only thumb in line behind recoil. A poor adaptation with a powerful combat gun, this is called the “h-grip”...***



***...because it causes the hand and arm to describe a lower case letter h.***

Instead of using the usual index finger placement with the pad or tip of the finger on the trigger, Lethal Force Institute teaches putting that finger on the trigger at the palmar crease of the distal joint. As illustrated in accompanying pictures, this technique gives the finger maximum leverage for a fast, clean, straight pull with minimum disturbance to the handgun. Masters of double-action revolver shooting have known and valued this technique for many, many decades, and it translates perfectly to the double-action semiautomatic pistol, being particularly valuable with the double-action-only models.

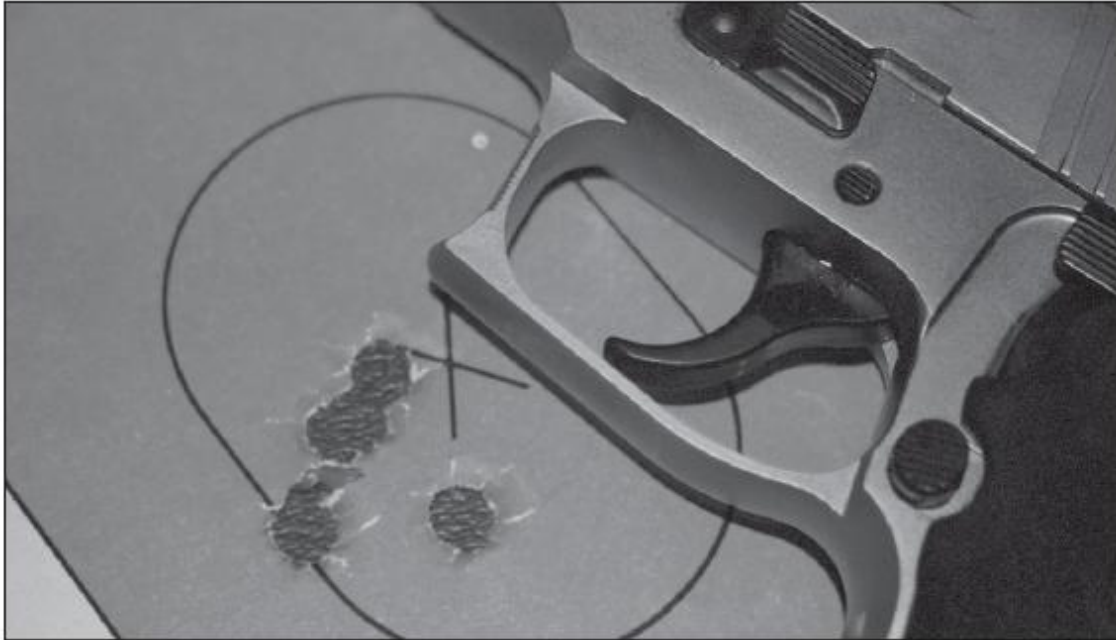
Transition from double- to single-action, despite the confusion and misinformation that abounds, is simple. No change of grasp or finger placement is required. Here's the secret.

Grasp the handgun firmly, holding it on target. Place the distal joint of the index finger on the trigger. Draw it back until the shot breaks. *Keep the finger in contact in exactly the same position at the distal joint.* Allow the trigger to return forward until it stops (or, if you insist, until it catches the link). Repeat the process, firing the subsequent shot(s). Yes, it is that simple.

The gun is like a long-range drill with the bullet as the drill bit. If the drill is not indexed, the holes will not appear in the intended place. The gun's sights are the most precise index. A hard focus on the front sight, once it is properly aligned with the rear sight, is critical to precision accuracy. At very close range and at high speed, a coarser visual index will still get you on target. This writer prefers the StressPoint Index of the StressFire system, with the front sight atop the rear sight. Even with the eyes locked onto the threat in "target focus," this alignment is coarse enough to be seen in secondary or tertiary focus and recognized by the mind as the signal to shoot right now. Looking over the top of the gun or superimposing the whole gun over the whole target can also work. Sometimes called "point shooting," these actually comprise quick and dirty aiming.



***DA technique as recommended here has given author these five hits at seven yards, decocking after each shot...***



*... and it looks as if everything is under control. Double-action autos are not so hard to master as some would have you believe. Pistol is stock P220 ST.*

*Importance of firm hold. To make a point on the SIGARMS Academy range, George Harris deliberately fires a.45 with light grasp. Note high muzzle rise...*



Good luck. The key to your development of defensive skill will be your training. With the SIG-Sauer pistol, you'll be well equipped in that environment, and we'll explore that shortly.



*...but now, using strong stance, George demonstrates negligible muzzle jump as his XS-sighted P245 sends a .45 slug into the steel target downrange.*

### ***References***

1. (1) "Training Tips" by George Harris, *Velocity* magazine, February 2003, P.5

## Chapter 15



### *Holstering the SIG-Sauer*



**D**eveloped originally for the soldier, the SIG-Sauer design was swiftly adopted by many armed citizens and by domestic police of many nations. All three categories of end user had one thing



in common: they had these pistols for self-defense, and that meant that they had to be carried.

The soldier with his web belt, the cop with his Sam Browne rig, and the citizen with the concealment holster all know what an inconvenience it can be to “carry” for somewhere between eight and 24 hours a day. Selection of the holster and its related accoutrements becomes critical. If it’s uncomfortable or, in concealment, too obvious, the wearer will find excuses to go without it, and will be helpless when the day comes that the gun is needed for its intended purpose.

Today, we are blessed with a better and more efficient selection of holsters, belts and ammo pouches than ever in the history of the handgun. There’s no good excuse for leaving your SIG at home when you go in harm’s way. Yes, you can carry a .25 auto or a miniature .22 revolver instead of, say, a P239. You can carry a Band-Aid in your first aid kit, too, instead of trauma dressings and Quick-Clot. But then you have to ask yourself why you have emergency gear in the first place.

The answer is simple: in case of an emergency. If someone is hemorrhaging, the Band-Aid isn’t going to stanch the massive bleeding. But with a good pressure dressing and a fist full of Quick-Clot, the victim has a fighting chance to survive. A mouse gun is convenient to carry. However, I’ve had occasion to show my students the death scene photos of a despondent and suicidal old man. He shot himself three times with a .25 auto before he died, pausing after each of the first two shots to go into the bathroom and examine himself in the mirror to find out why he was still up and running. After the third and finally fatal shot, he had time to carefully set the gun down and fold his hands across his chest in the classic “resting in the coffin” position. I explain to the students, “This is the effect of three muzzle-contact small-caliber pistol wounds on a frail, elderly man who wants to die. It shouldn’t be hard to extrapolate what the effects of that low-powered gunfire might have been on a huge, enraged, drug-fueled attacker who wanted *you* to die.”



***Quality is always worth it. This is the splendidly made, high performance #55BN by Milt Sparks Leather, designed by Bruce Nelson.***

## **Breaking It Down**

A couple of things need to be broken down and treated separately here. There are holsters that work for large pistols but not for small ones, and there are holsters that make sense for large pistols that would be ludicrous when filled with little guns. Also, just semantically, the chapter title “Holstering the SIG-Sauer” can be taken two ways. It can mean “picking a holster,” and we’ll get to that momentarily. But it can also mean “putting your gun in the holster.” You’re going to have to do that no matter what size your pistol may be, so let’s discuss that first.

## **Safely Into The Holster**

The newcomer to this gun-carrying business worries about being too quick on the trigger and shooting his foot off when he draws the gun. Actually, what seems to happen more often is that a careless shooter accidentally discharges the weapon while putting it into the holster.

In Southern California, one officer became understandably rattled after shooting a large, vicious dog that attacked him. It took a good part of a high-capacity magazine of department-issue 147-grain subsonic 9mm JHP to put the animal down for good. He forgot to decock his traditional double-action service pistol, which did not happen to be a SIG, and he also forgot to remove his index finger from the trigger of his still-cocked and still-loaded pistol. He thrust the weapon into the holster. His finger hit the edge of the holster and stopped. The rest of the gun kept going.

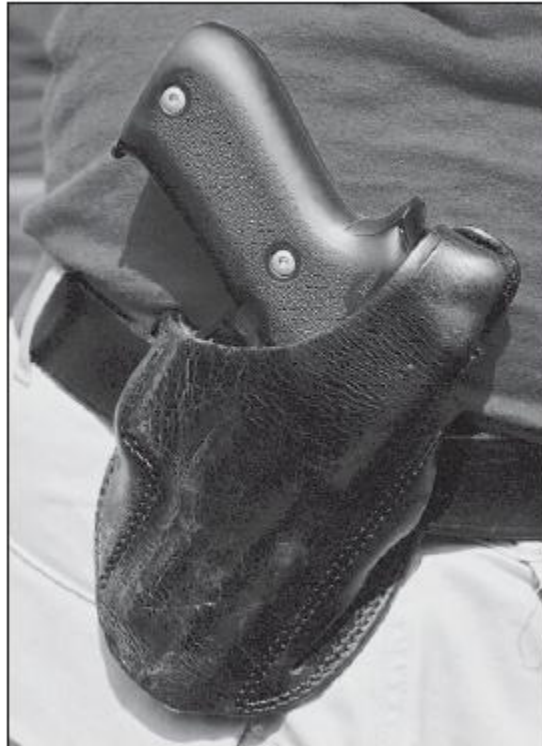


***Inspect your holster as carefully as your gun. This old Safariland duty thumb-break's leather safety strap is cracked with age, disqualifying it from future use.***

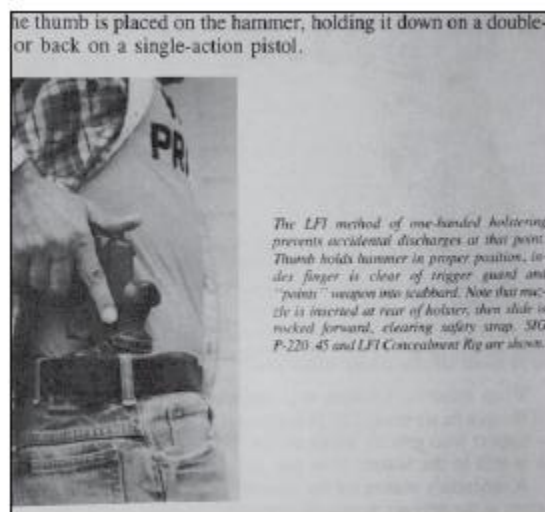
BANG! He shot himself in the leg. Startled and terrified, also understandably, he went into that endless loop mode people enter when they're confused, and kept trying to do what he had been doing. The issue holster, designed by his department and made to their specifications by the gunleather company, was open in the front and had allowed the slide to cycle, ejecting the fired round and feeding another into the firing chamber. As he attempted to holster again, the same thing happened. BANG!

Along about then, he connected the cause and effect, and stopped. However, he now had two bullet holes in his leg. He survived, and interestingly enough, sued the holster company...

All of which leads us to a holstering principle I have been teaching for years and years. HOLSTER YOUR PISTOL WITH YOUR THUMB ON THE HAMMER, HOLDING IT IN PLACE, AND WITH YOUR TRIGGER FINGER EXTENDED OUTSIDE THE TRIGGER GUARD! The index finger is called the "pointing finger" for a reason: in this case, it points the gun into the holster and will make the task smoother, faster, and altogether more professionally accomplished. They call it the index finger, after all, because it *indexes*. As you holster, you want to feel the surface of the gun's scabbard beneath your trigger finger: another felt index that the finger is safely out of the way.



***A safety strap makes sense even on plainclothes/off duty holsters, like this one carrying a Chicago officer's P220 DAO .45.***



***The author has been teaching thumb-on-hammer holstering for more than 20 years, as seen in this old Ayoob book, and no pistol has yet accidentally discharged when holstered in this manner.***

The thumb on the hammer verifies that the double-action pistol is in fact decocked. If the trigger finger or anything else catches the trigger, the thumb will feel the hammer start back in time to stop everything and prevent an unintentional discharge from taking place. The thumb is, after all, holding the hammer down. If you are holstering a cocked and locked 1911 or P35 pistol, and something trips the hammer forward, your thumb is in position to interdict the hammer's fall before the gun can fire.

Do not “palm” the gun when doing this. The way you do an “administrative” holstering while calm is the way you will have programmed yourself to do it when you have to holster after the gun has been drawn in a high-stress situation. In the latter scenario, if you realize in mid-process that you have begun to holster too soon, you can simply bring the thumb back into firing position as you raise the gun again. In holstering, nothing changes in the grasp except that the thumb goes to the hammer and, of course, the trigger finger is kept clear of the trigger guard. The remaining three grasping fingers *should not change their positions at all*.



***With a second belt loop as suggested by Mark Morris, this ARG-M inside-the-waistband holster locks its P220 firmly in position.***

This is a generic technique that will work with any handgun, even a striker-fired Glock, Kahr, or what have you. The thumb on the back of the slide holds the slide forward, preventing a tight holster from pushing the slide back and out of battery. When the gun is drawn, there is no guarantee that the tight holster will pull the gun back into battery again, and a gun out of battery is a gun that will not fire when you need it to fire. The thumb on the back of the slide of the striker-fired pistol ensures that the gun is in

battery while in the holster, and therefore will be in battery and ready to do what it's there for when it is drawn.

With the SIG-Sauer pistol, I suggest that you modify the technique very slightly. The easy-working slide of the typical SIG-Sauer can, in fact, push back slightly out of battery when inserted into a too-tight holster. This is because the safety shelf on which the hammer sits (erroneously called a “half-cock notch” by some) holds the hammer slightly back from the rear face of the SIG's slide. To keep that from happening, simply place the thumb diagonally at the back of the slide as shown in the accompanying photographs, so that the thumb at once is holding the hammer *and* the slide of the SIG in the appropriate forward position.



***Twin “J-hooks” effectively secure this Kydex holster by Sidearmor inside the waistband. Pistol is P229.***



***Holsters designed by and for women, this one is very well made by Christine Cunningham. Neutral tilt scabbard holds dummy P228...***

Use this “holstering grasp” while inserting your pistol into any receptacle. And when you put a gun in a drawer or lock box, remember the admonition we all give our kids and “Watch what you’re doing!” Many years ago in Alaska, a police officer became distracted in conversation with a brother officer as he put his pistol in a lock box while entering a secure area. He did not realize that as his P220 entered the metal receptacle on an angle, its hammer caught on the edge of the door and became cocked as he thrust the gun in. Later, without looking at the gun, he retrieved the cocked pistol and shoved it in his holster. (Safety straps on some holsters for double-action pistols are cut in such a way that they can snap with the hammer back instead of properly forward.) The stage was set for an injury-producing accidental discharge that occurred later that night. Fortunately, it was not fatal.

## **Best Rigs for Small SIGs**

The smaller the gun, the easier it is to hide in a concealment holster. No one reading this needed to pay the price of this book to figure *that* one out. The fact is, however, that what’s small for one isn’t that small for another.



I'm sure there are guys out there with legs the size of The Incredible Hulk's and pants huge enough for me to cut off and use as T-shirts, who can wear SIG P228s or P229s in ankle holsters. I've met guys who have carried the P239 in an ankle rig. But the fact is, I can't hide a gun that big there, and neither can most people.

***...offset twin belt loops give maximum IWB concealment of same...***



***...and this cross draw with dummy P230 can also serve as a backward tilt/forward rake “appendix holster.”***



***Offset belt loops as offered on Sparks Versa-Max create a low-profile IWB that makes even this SIG with double-column magazine virtually disappear under a concealing garment.***

Even the little P230 and P232 pistols are a bit on the long side in both barrel length and slide top-to-gun butt height for ankle wear. In any case, I wouldn't recommend either the SIG or the Walther .380 for that type of carry. They are finely fitted pistols, and do not well survive the dust and grit with which an “ankle gun” is covered after just a day of being carried a few inches above where the soles of the shoes are kicking up dirt with every step. I've run across cases of ankle-carried SIG and Walther .380s that were drawn and fired in self-defense and jammed in the midst of the firefight because they choked on that grit. A P239 or larger SIG will cope with that, but those guns are just a *little* too thick and just a *little* too heavy to be practical for all day, every day carry strapped to most people's ankles.

Shoulder rigs, particularly the horizontal styles, work great with the smaller guns since the shorter gun doesn't require as much depth of chest to conceal when slung under the arm. The fact is, however, that most folks

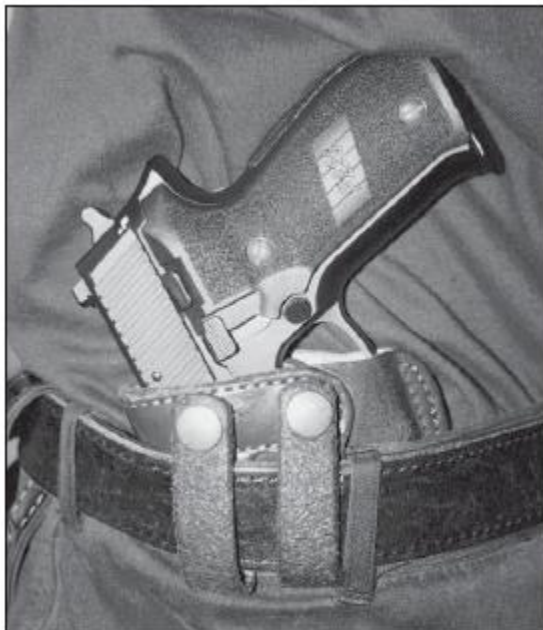
who have experimented a lot with the different gun/holster combinations find that the shoulder rig is actually more suitable for larger pistols in most applications.

***First designed by the late Bruce Nelson and known as the Summer Special, this is the most-copied style of IWB holster...***



The vest holster favors a gun with a short butt and a slim profile. By “vest holster,” I mean a scabbard that attaches to the side of the chest under the uniform shirt on the elastic Velcro-closing straps of a bullet-resistant vest. The slimness of the SIG .380 makes it a natural for this, but then you’re back to that thing about “what do you really carry that backup gun for?” I confess that I carried a SIG P230 there for a while, but constant reminders from the field of the relative impotence of its .380 cartridge brought me back to something more powerful as my second gun. A P239 won’t be that much more noticeable in the same kind of carry, and now you’re talking about something really serious coming out of the muzzle

when you really need what the late, great police instructor Bill Clede called  
“Onion Field Insurance.”



*...and is as fast and concealable today as it ever was.*



***This Ky-Tac IWB is extraordinarily fast, comfortable, and concealable...***



***...and its waterproof material helps to shield this P228 from wearer's perspiration.***

If you want a pocket gun, you may want a revolver instead of *any* semiautomatic pistol. Again and again I've tried different small autos in the side pocket, from the ingenious little Seecamp and NAA Guardian .32s up to the baby Glock, and after each period of experiment I've come back to the snub-nosed .38 Special revolver loaded with +P ammunition. It's not so much a "power thing" as an "accessibility thing." True, the revolver with shrouded hammer will fire every shot through a coat pocket and the auto pistol will probably jam on the first shot when the slide binds in the fabric and the lining of the pocket blocks the ejecting casing. However, in a pants pocket you're not going to shoot through the clothing anyway, unless your plan is to shoot yourself in the kneecap. Physical human dynamics get in the way.

The “pocket problem” with autos is, the very flatness of the pistol that made it so comfortable to carry there holds the inner side of the gun tight against your thigh, and when you reach for the gun your fingers have to claw to get a hold. The rounded grip-frame of the small revolver guides the reaching fingers into a drawing position much more rapidly. My own bottom line on this can be stated simply: I don’t carry my SIGs in pants pockets.

The belly band, on the other hand, makes huge sense for small autos such as the shorter SIGs. Developed originally by John Bianchi in the 1960s and first produced by the MMGR Company in New York, the belly band is a 4-inch-wide elastic belt with a gun pouch. It rides very nicely under a tucked in shirt, “inside the outerwear but outside the underwear.” Holster catalogues show these things worn wrong, across the lower rib cage. That can work for buxom women if the pistol butt is centered in the midst of the cleavage, but for anyone else, it’s going to look as if they’re wearing a colostomy bag in the wrong place. The belly band should be at belt level.

With a short automatic or a snub-nosed revolver, it can be particularly effective to carry the gun at the front of the abdomen. Most males find that wearing it to the left of the navel if they are right handed, vice versa for southpaws, puts the gun in a very accessible cross-draw position. The hand can access it quickly through the front of the shirt. I personally find that anything bigger than a P230/P232, P239, or snubby revolver will, when I sit down, dig into the femoral artery where my leg joins my torso. Taller men with higher waists don’t seem to have that problem. Neither do women, who have higher waists in any case and seem to be much more comfortable with the pistol at centerline of the abdomen.

My older daughter, a tall and slim young woman, found this the optimal place to carry a P239-size gun. She found she could conceal it under almost anything. She also discovered that this location made the gun very accessible even under winter clothing. She proved it one snowy night when two would-be rapists came after her. The gun was out so fast that one of them almost fell trying to backtrack away from her as he and his accomplice fled her drawn pistol. I was damn glad that she had that gun. I sincerely hope that both of those punks still wake up screaming with nightmare recollections of the muzzle of her 9mm pointing at them.

If the belly band doesn't feel comfortable with the gun in the front cross draw position, the wearer can always slide it around to put the gun toward the strong side hip. In fact, this works particularly well for larger pistols that must be hidden deep, as will be discussed in greater depth shortly.

Women who wear regular belt scabbards often find that wearing the gun in front of the hip, instead of behind it where most of their brothers carry, works better for them. The cross draw and shoulder holsters that men find awkward tend to be ideal for women who tend to have narrower torsos, higher waists, and proportionally longer and more limber arms. Conversely, the high-ride hip holsters that work so well for men can be torture for many females, with the discomfort increasing in proportion to their curves. The wider female pelvis pushes the gun muzzle out, which means it pushes the higher-mounted gun butt *in*, and a gun butt that on the male is at kidney level is, even on his sister of the same height, at lower rib cage level. This not only impedes the draw but can be hellishly uncomfortable in all-day wear.



***The Galco interpretation of the Yaqui Slide is a very popular holster.***





***Fanny packs are popular, and can easily hide this full size P226 and an extended 20-rd 9mm magazine.***

We've been talking about the smaller pistols here. There are a great many of us who prefer the full-size SIGs for our particular needs. Can these be carried concealed? Most certainly! So we'll now segue to that topic.

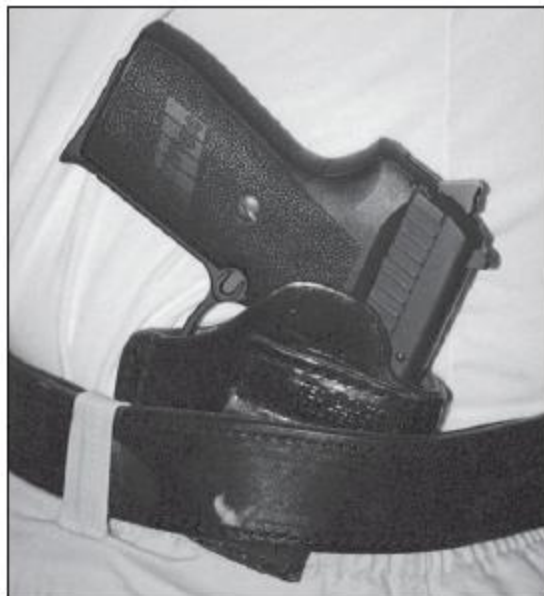
## **Best Rigs For Big SIGs**

If you want a top quality fighting handgun in a sufficiently potent caliber – 9mm and up – the SIG-Sauer catalog should be one of your first stops. If concealment is what you want, you can't do better than the P239, offered in 9mm, .357 SIG, and .40 S&W. Countless cops and citizens alike, as well as the U.S. Army Criminal Investigation Division, use the compact high-capacity P228 9mm, which is also extremely popular with the FBI. About the same size, but heavier in the slide, is the P229. It's a light-kicking joy to shoot in 9mm, but most prefer it in its more potent chamberings, the .40 S&W and the .357 SIG. Even trimmer for concealed carry is the 9mm P225, originally developed for German police and still widely used by them. This fine little 9mm is favored as their uniform duty weapon by two

of the nation's top officer survival instructors, Dave Spaulding of the Montgomery County Sheriff's Department (Dayton, OH) and Roy Huntington of the San Diego Police Department.

Yet there are those of us who prefer the larger SIG-Sauer pistols. Some just can't resist the 16-round capacity of the 9mm P226. The high-capacity magazines are still available on the secondary and gun show market for private citizens and from licensed dealers for police officers. For some others, the reason is caliber: the .38 Super and .45 ACP are available only in the service-size P220 models. Being a fan of the .45 ACP, that's important to me. Besides, I've determined that the P220 .45 European model with flat backstrap and butt-heel magazine release works better in my hand than any other pistol when I'm encumbered with heavy gloves during the brutal winters of my northern New England home turf.

So it is that I've had a lot of occasion to carry full-size SIG-Sauer pistols concealed. For many years, SIGs were my teaching guns at Lethal Force Institute, and the P226 or P220 would be with me even in tropical climes, still carried concealed as my personal defense weapon after work. Thus, I learned to carry the full-sized SIGs under anything from a polo shirt to a winter mackinaw.



***Using Velcro tab mated with Velcro lining of matching dress gunbelt, the LFI Concealment Rig designed by manufacturer Ted Blocker and the***

*author gives wide range of secure positioning, and easily conceals not only this subcompact P239...*



*... but also this full size P226.*



*Three takes on magazine pouches. Left, the Blade-Tech double pouch made of Kydex is super-fast, reasonably concealable. Dillon leather single-cell pouch, center, is comfortable, affordable, and very fast. LFI Concealment Rig pouch, right, is slower but the most concealable; note the leather shield to protect body from magazine edge in IWB carry.*

I have learned from people who came to similar decisions through much, much harder expedients. Most reading this will recall the April 11, 1986 gunfight in Miami in which two FBI agents were killed and three crippled for life in a harrowing gunfight before the two cop killers were shot dead. One of the maimed FBI men was supervisory special agent Gordon McNeill. In the opening moments of the fight, McNeill emptied his six-shot revolver and shot one suspect but was wounded, in the gun hand. Unable to reload or otherwise continue firing, he turned to run to his vehicle for his shotgun, and at this helpless moment he was shot and crippled by cop killer Michael Platt. The last I knew, McNeill, still working for the FBI, was carrying a 16-shot SIG P226 loaded with Federal hollow-point subsonic 9mm ammunition.

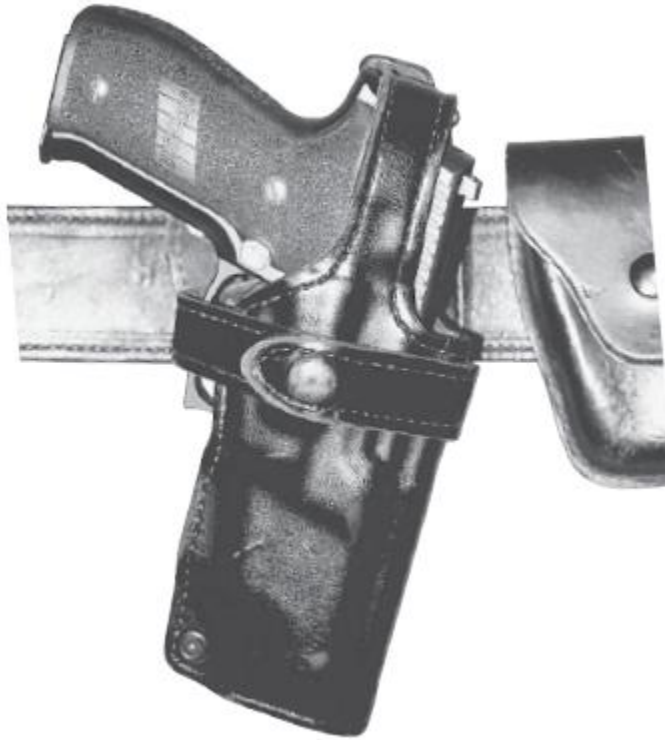
Special agent Edmundo Mireles is considered by most to be the hero of that terrible shootout. His left arm nearly blown off by a .223 round, Ed cycled his 12 gauge pump one handed to shoot back and when it ran dry, emptied his six-shot revolver as he staggered into the kill zone, slaying the two gunmen with five hits out of six shots. Struck by how much lead these suspects had absorbed before they stopped fighting — including .38 and 9mm slugs and 00 buckshot — Mireles told me he had become one of the first FBI agents to switch to the SIG P220 .45 automatic when it subsequently became an option for field agents.



*...”Level Two” is typified by this Safariland SLS (Self-Locking System) holster, here containing a .40 caliber SIG P229, which requires two moves to release the gun for draw...*



*Police duty rigs are often graded by levels of security. “Level One” encompasses this simple Uncle Mike’s rig, with a single thumb-break safety strap retaining the P226...*



*... and “Level Three” is exemplified by the author’s favorite in uniform, this Safariland SS-III/ 070, which requires three retention elements to be cleared before draw is allowed.*





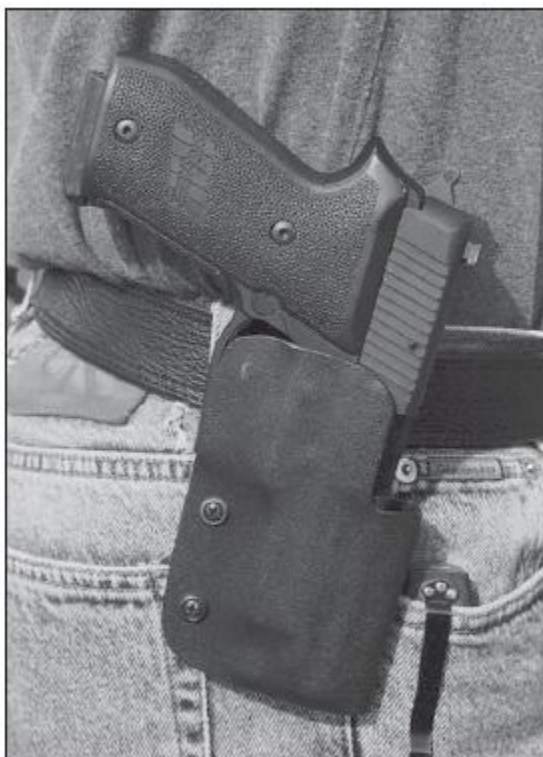
***Author begins draw of P226 from comfortable, versatile Don Hume belt slide.***

Carrying the SIG in uniform is simple enough. I carried the P226 for a while in a Don Hume Lynx, which I liked because the leather of this Level II security holster came up over the glowing Trijicon night sights, concealing them from view if I was sneaking up on a suspect in the dark. In time, however, I went to the P220 .45 in what I consider the best of all police duty holsters, the Security Level III Safariland 070, designed by Bill Rogers as the SS-III.

Concealed carry required more options, because four-season wear put a lot more cards in the game. Basically, it comes down to three sets of holsters and wardrobes, because spring and fall are pretty close.



***SIG-Sauer is one of the safest guns to carry “Mexican style,” i.e., thrust into the waistband without a holster, but it’s still not recommended. For one thing, it is insufficiently secure if there is strenuous activity.***



***Kydex holsters are growing in popularity because they are inexpensive, fast, and comfortable, but some have been known to break off the belt during fights over the gun.***

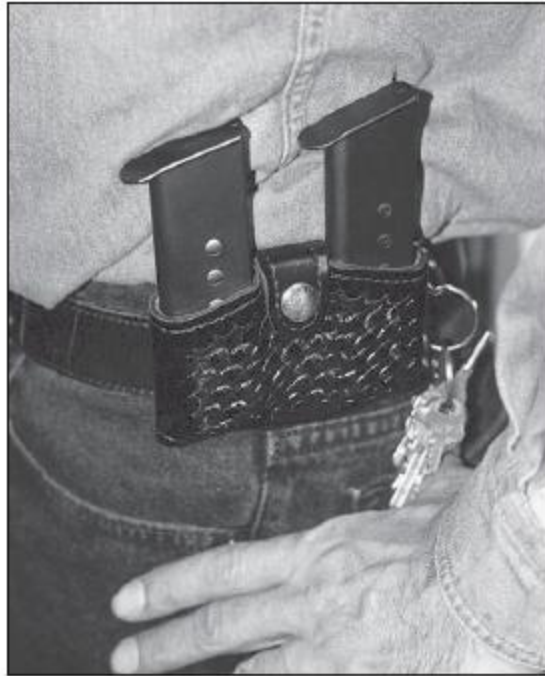


## Hot Weather Carry

Summer means that, unless you're going in and out of formal environments in the course of your daily work, you won't have an outer garment like a suit coat on all the time. I recall one bodyguard assignment where my consultation with state law enforcement indicated that the client wasn't paranoid: the suspect *did* intend to kill him and had committed murder before. The locale was murderously hot and humid.

I wore body armor for that one, under a wardrobe of untucked square-bottom bowler's shirts, khaki bush shirts, and the guyaberra shirts popularized by Cubans in Miami. All were one size large, allowing for both the Second Chance vest and the P220 .45 loaded with CCI's famously effective 200-grain "flying ashtray" bullets, which it fed perfectly and shot with deadly match accuracy.

The holster was the LFI Concealment Rig that I had co-designed with Ted Blocker in the 1980s. It comes open-top or thumb-break. I have both. I wore the open-top on this job, because the small fraction of a second difference in drawing speed was likely to matter given the profile of the attacker, who would get to move first and would predictably come in shooting. I wore two spare magazines inside my waistband in the complementary carrier on the opposite side. Both mated with Velcro tabs to the Velcro lining inside the dress gunbelt. The result was perfect concealment, all day comfort, and all the speed that was possible from under a concealing shirt. (The environment combined with the weather to make any garment but an untucked shirt out of the question).



***Fast on and off, fast to draw from, and very concealable, this Safariland double-cell magazine pouch is one of the author's favorites. Magazines are the older style SIG P220.***

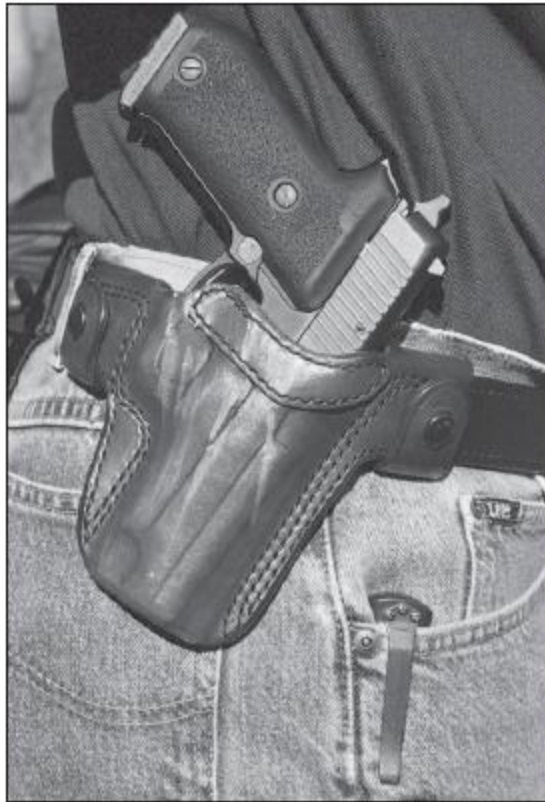
In addition to the small backup revolvers in the side pocket and on the ankle, I also had with me my SIG P226, loaded with the 20-round extended magazine. This rode inside the Guardian Leather Portfolio, which looks like a lawyer's briefcase and has the additional advantage of containing a hidden Level II plate of bullet-resistant hardshell material. In the front seat of the principal's Mercedes I could access it quickly, and 21 rounds of 9mm were a comforting resource if one of the predictable threat profiles – the suspect pulling alongside us in traffic or at a stoplight while inside his own vehicle – should materialize.

The murderer never carried out his threat. The SIGs remained silent. But despite tropical weather, both the P226 and the P220 had hidden well, constantly and instantly ready to deliver maximum accuracy and downrange force. The big SIGs had been most comforting, more so for me than anything smaller would have been.

Inside-the-waistband carry under untucked shirts works well for hiding full-size combat handguns like these. The key is that the shirt has to be one size larger to give enough drape to hide the full-size grip, and the trousers

have to be 2 inches larger in the waist to allow comfortable long-term carry of both holstered gun and spare magazine(s).

For deepest concealment, I've found I can hide even these big SIGs – indeed, a 4-inch Smith & Wesson .44 Magnum – under a polo shirt in a “belly band” holster. There are several of these on the market; the one I keep coming back to for personal use is the Bianchi Ranger, which doubles as a money belt. It lets me bury the gun low into the waistband for maximum concealment. However, few such holsters give any protection to the gun from sweat or from body acids, and even though the standard phosphate finish on the full-size SIGs resists corrosion well, you might not want to push your luck. If you anticipate this carry, I'd suggest ordering your new SIG from the factory with the optional and excellent K-Kote finish, or refinishing the one you have with something like Birdsong Black-T, which has proven very effective on my Gunsite Custom P226.



***Alessi CQC is the author's choice for abelt scabbard that is quick to take on and off.***

One point on carrying these guns in deep concealment: The P239 and the other SIG compacts, designed for hidden wear, have magazines whose baseplates have plastic shields rounded at the edges for comfort in concealed carry. The P220 and P226 were designed as uniform police/military holster weapons, and their mags have sharp edges on the floorplates. You want to carry these spare mags in pouches that hold them a little away from the body, or concealment pouches like the Blocker or the Alessi, which put leather between the sharp edges and your body. How do I know this, you ask? Trust me, I know this.

## Cool Weather

Spring and fall generally mean jacket or sweater weather, and these garments greatly ease the concealed carry task with full-size service pistols like the P226 and P220. The sweater should be a bulky knit, or a loose cardigan, ideally worn open. Just make sure that the latter is long enough that its hem drops well below the waist.

A Pendleton style “shirt-jac” is another great idea for hiding a full-size gun. Again, an inside-the-waistband holster works the best. If I’m not dealing with a “threat profile” where speed is of the essence, as in the executive protection situation mentioned above, I’ll use the same style Blocker LFI Concealment Rig but with the thumb-break. I recently compared my open-top and thumb-break Concealment Rigs for my big SIGs (the P220 holster fits the P226 and vice versa) and couldn’t help but notice that over the years I’d put a helluva lot more wear on the one with the safety strap.

Remember, most physical confrontations are more likely to result in physical force struggles than in the need to resort to a lethal weapon. If a guy grabs me around the waist during a fight, he’s going to feel my gun, and if he goes for it I’ll appreciate anything that buys me a little more time to execute a counter-disarming, or weapon retention, technique. I say that as someone who learned the Kansas City method of handgun retention from its founder Jim Lindell in 1977, was certified to instruct in the discipline by Lindell at Smith & Wesson Academy in 1980, and became a trainer/certifier

of other instructors in the same system through the National Law Enforcement Training Center in 1990.



***This DA-2 belt scabbard, with about 15 years of wear, is one of the author's favorites, and moderately priced.***

Jackets, of course, are easier than sweaters. For one thing, they make outside-the-belt holsters much more viable as concealment wear. The sports coat or windbreaker also should be one size large if the holster for a gun this size is on the belt instead of inside it.

With any belt holster, it is critically important that the belt slots fit perfectly to the belt, and that the belt be sturdy enough to provide a solid drawing platform. Otherwise, you can expect the holster to come up a bit with the gun, slowing or even stalling an emergency draw. You wouldn't believe how many people I run across carrying fine guns in junk holsters, or fine guns in fine holsters on junk belts. The SIG-Sauer is a superbly engineered piece of specialized equipment, as good and as reliable at what it's designed for as the Rolex is as a timepiece or the Mercedes-Benz is as an automobile. You wouldn't put your \$10,000 Rolex Oyster on a \$5 chicken-hide watchband, or mount two-ply retread tires on your Benz. Don't carry your SIG in crap leather, either.



*The author believes horizontal carry is the fastest style of shoulder holster, as on this Mitch Rosen Stylemaster.*

*The shrouded safety strap of the Don Hume Lynx duty holster shielded the night sights and kept them from giving officer's position away in the dark.*



Blocker's DA-1 thumb-break hip scabbard is an excellent choice. If you need quick on and off capability, I haven't found anything better than Safariland's paddle holster, which will secure even on beltless slacks. It rides a bit high for me, but that's probably more a peculiarity of my build than of the holster.

## **Cold Weather**

You wear heavy clothing, and lots of it, when it's cold. It would seem that this would solve the problem of gun concealment. Actually, as far as it goes, it does just that. But there are two things a lot of folks miss.

One is that you're not always wearing the outer garments. When the winter coat comes off, you probably still want the gun concealed.

The other is that you still have to be able to get to the damn thing... under all that clothing... and quite possibly with your gloves on! It terrifies me how many people carry guns in deep cold without practicing their deployment while wearing winter garb and gloves. Don't fall into that trap!

Once again, the police uniform is not the problem. I favor hip-length instead of waist-length winter patrol jackets to cover the glutes and the groin, but they are tailored with "gun-slits" on either side, and my Lynx and my Safariland 070 alike had "jacket slots" that kept the fabric from sliding over the holstered pistol. These holsters hold the gun out clear of the body. Even a gloved hand can pop the necessary safety straps and draw with more than sufficient speed to react to an emergency. This is not necessarily so with a concealment holster that holds the gun tight to the body, with heavy fabric from one or two outer garments pressing inward from one side and what might be a heavier shirt pressing tighter against the thumb-break paddle of an inside-the-waistband holster from the other. Reaching under multiple garments with gloves on to grab a holstered pistol is hard enough. Of late, I've gone to concealment holsters without safety straps for deep cold wear.

***Safariland is one of the most popular paddle holster styles. It's convenient...***



***...and can be comfortable with a proper orthopedic curve, but can be torn from the belt by a powerful assailant in a struggle for the gun.***



If I need a high degree of concealment once the foul-weather coat comes off, it'll be my open-top LFI Concealment Rig inside the waistband. If the sports coat, suit coat, or untucked flannel shirt will remain as a covering garment when the heavy coat goes on the hook, I'm more likely to use my Rosen sharkskin beltslide or my DA-2, the ultrafast scabbard by Blocker with the open top. I have to say I haven't seen an outside-the-belt holster that allows the gun to be better concealed than the DA series. The holster is extremely secure; despite all manner of strenuous "sudden anaerobic activity" including running on ice and snow and occasionally falling on same, my John Quintrall "Jim Andrews Package" Custom P220 has never even *started* to come out of any of the holsters mentioned above.

A tip on drawing. I'll draw from under a closed, relatively short-waisted parka the way I would from under a sweater or a closed, untucked shirt. Plan A is the "Hackathorn Rip," Ken Hackathorn's technique of grabbing the hem of the garment in front of the holster and ripping it up toward the gun-side shoulder to clear a drawing path for the gun hand. Plan B, in case that hand is otherwise involved (with a flashlight or communications device, or warding off an assailant) is to run my gun hand's thumb up the trouser seam to catch and lift the garment, then grab the pistol and throw the hip to the side opposite the gun hand, creating an easy movement path for a one-handed draw.



***The belly band is a most useful option for deep concealment, especially under tucked-in shirts. This one, made by Bianchi, holds a SIG P228...***

It is important to *leave the under coat, if there is one, unbuttoned, and to button the outer coat no farther downward than just above the navel!* This allows you to sweep the edge of your hand in toward your center and back toward your strong-side hip. A drop of the hip sideways (to the left, if you

carry on the right) now facilitates a quick and easy strong-side draw from a belt holster.

What about shoulder holsters? Because of bulge factors, they make more sense for most people with guns this size under heavy coats in winter. In the most brutal weather, I'll wear one of Bianchi's holsters – the late, great X-15 or one of their later equivalents – that hold the big SIG muzzle down, butt up and forward under my non-dominant arm. Then the coat will be buttoned or zipped to a point a little way up the sternum. Since I'm right-handed and men's button lines fold to the right, the weight of the heavy fabric holds the rest of the garment warmly closed across my chest...but if I raise my right elbow high I can knife my hand down and in across my chest and execute a right hand draw with satisfying speed.



***...and does double duty as a money belt.***

When it's cold but not truly arctic, I wear what I've found to be the most comfortable of shoulder holsters: Bianchi's sinfully comfortable Tuxedo, made of lightweight black nylon. I simply leave one button across the chest undone on the topcoat, and the right hand can spear-finger its way right under that and any other covering garment beneath for as fast a draw as I can execute. The P220 under my left armpit is partially balanced by a pair of full .45 magazines in the double-cell pouch suspended under my right axilla. As with a hip holster, I leave the suit coat or sport coat under the outer garment unbuttoned to facilitate this draw.



***To go to safe holstering grasp, come from this firing hold...***

A crossdraw can also work well for some people, depending on build and range of movement. Leave the undercoat unbuttoned, and button the overcoat in a manner that leaves undone the button in the path of the cross-body draw.

It should be noted that the standard SIG-Sauer pistol design is particularly well suited for use in a winter-gloved hand. The trigger guard of the big P220 and P226, originally designed for all-weather military use, is large enough to easily admit a gloved finger. The long, firm pull necessary to fire the first double-action shot is an effective answer to the problem of a numb or padded finger accidentally putting too much pressure on a trigger that could be too sensitive to that pressure in a stressful gunpoint encounter.

Once the shooting starts, you don't have to worry about a double-action-only trigger mechanism failing to return forward for the next necessary shot because a heavily gloved finger blocked it. Even with snowmobile gloves on, my SIGs keep shooting. When the need to fire has ended, the right-

handed shooter can easily thumb down the ergonomically mounted SIG decocking lever, and a southpaw can do the same with the trigger finger.

## Perspectives

Why do we carry a gun in the first place? In case we need to employ it in a worst-case scenario to prevent the imminent and otherwise unavoidable danger of death or great bodily harm to innocent people including ourselves! If you knew you were going to have to use the pistol you carry to defend your life, you'd want the most powerful one, with the most ammo and the longest sight radius and the most solid fit to your hand. This is why I prefer to carry a full-size SIG-Sauer for my own needs instead of one of the same firm's compacts expressly designed for concealed carry.



*...to this position, moving only the thumb and not palming the gun...*

Obviously, the advice given above for the P220 and P226 works for any full size revolver or semiautomatic pistol at a power level that fits Jeff

Cooper's classic description, "the fighting handgun."



*...and place thumb diagonally as shown, securing both slide and hammer in forward position. Trigger finger is straight alongside the frame throughout.*

## Chapter 16



### *Don't Let Your SIG Go Sour*

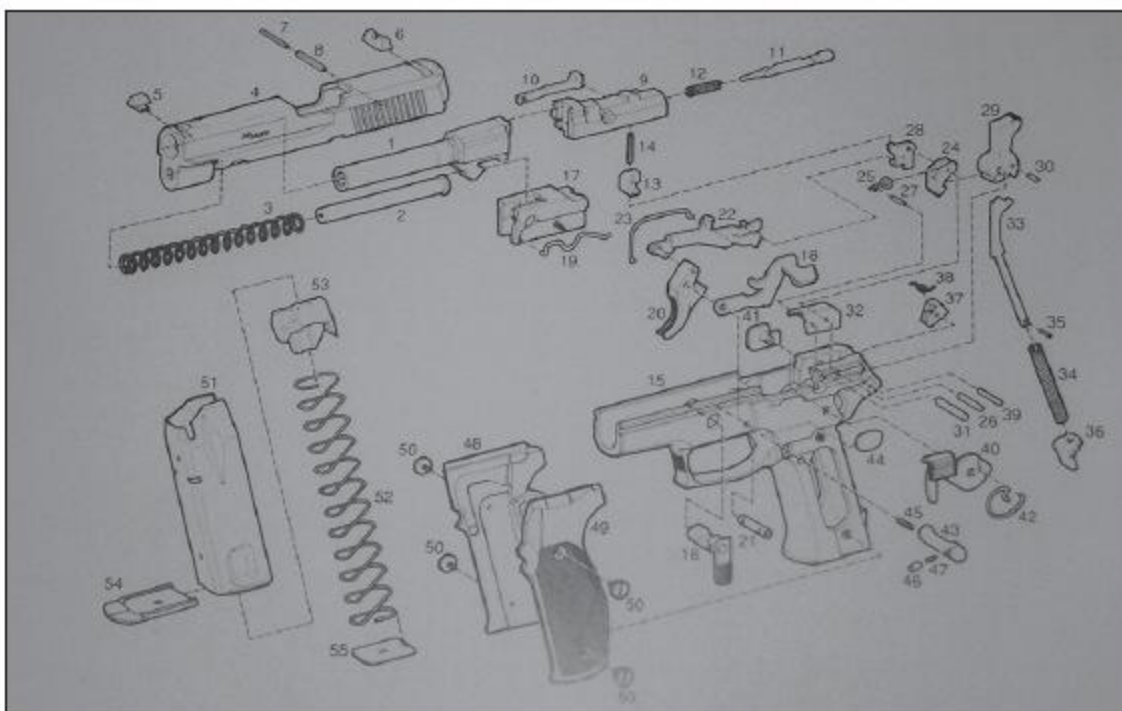


**A**nything created by man can fail, including our parents' children. The finest machine can break if given enough wear and/or abuse, and the finest machine deserves the finest maintenance.

The SIG-Sauer pistol is no exception. If I've learned anything in all these decades with handguns, it's that there isn't a one of them that can't break.

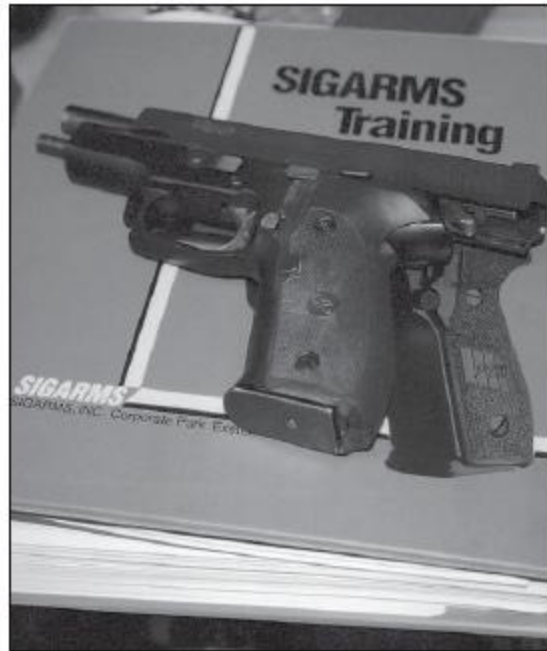
The SIG-Sauer was developed as a combat pistol. As such, it's a life-saving emergency rescue tool. Learn from firefighters. When they're not actually putting their life on the line or training to do so, they're inspecting and maintaining the equipment to which at any moment they may have to entrust their lives. Treat your SIG-Sauer – and any other firearm – the same way, and you'll minimize the chances that it will ever let you down.

For this chapter, I am indebted to Rick Devoid, a certified SIG armorer since the mid-1990s and staff armorer for Lethal Force Institute. He is located at Tarnhelm, 431 High St., Boscawen, NH 03303, tel (603)796-2551, [www.tarnhelm.com](http://www.tarnhelm.com).



***The SIG-Sauer is a proven and durable design.***





***SIGARMS takes no chances on maintenance. This is their substantial armorer's guide.***

## **Routine Inspection**

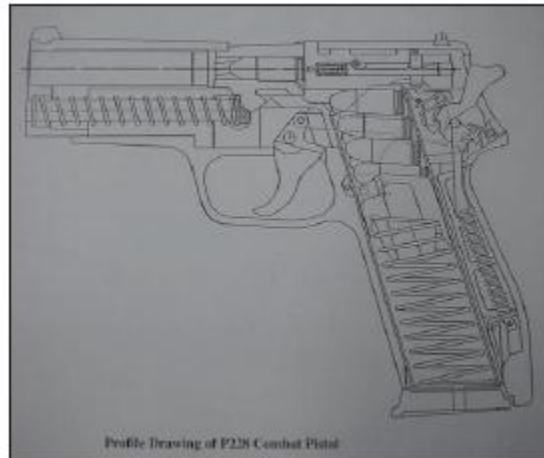
Make sure your pistol is unloaded, checking by sight and feel. Lock the slide open. Now, with the muzzle in a safe direction, thumb down the slide release (or, on the P230 or P232, snap the slide to the rear) and let the slide fly forward. Watch the hammer. If it follows the slide down and is not double-action-only, your gun has a big problem.

Close the slide of the empty pistol. Drop a full-size #2 pencil down the bore, eraser first. Cock the hammer, point the pistol straight up, and activate the decocking lever. The pencil should only quiver when the hammer falls. If the pencil jumps, it means a firing pin got through when it shouldn't have and struck the eraser, which means the decocking mechanism is not working properly and the stage is set for an accidental discharge.

Re-insert the pencil down the barrel and point the empty gun straight up again. Pull the trigger. The pencil should go flying, propelled by the impact of the firing pin. If it doesn't, you probably have a broken firing pin. **FOR THIS AND THE PREVIOUS TEST, MAKE SURE YOU AND ALL AROUND YOU ARE WEARING SAFETY GLASSES. THAT PENCIL**



CAN GO FLYING HARD AND FAST ENOUGH TO CAUSE EYE DAMAGE.



***This is an internal diagram of the SIG-Sauer, one of the world's most proven defensive handguns. P228 is shown.***

Cock the hammer of the unloaded pistol and, with your thumb, push forward on the hammer. If it snaps forward without the trigger or decocker having been activated, there is some bad sear engagement that needs immediate attention.

Examine the extractor area to make sure it is clear of crud and debris. This is a weak point in every semiautomatic firearm. The SIG armorer's manual even makes a point of stating in all caps, "SPECIAL ATTENTION MUST BE GIVEN TO CLEANING THE EXTRACTOR."

Particularly if you have an older model 9mm and have been shooting a lot of hot ammo in it, check the frame very carefully. If the frame is going to crack, I've seen it most commonly on the left side toward the front, right along the slide rails.

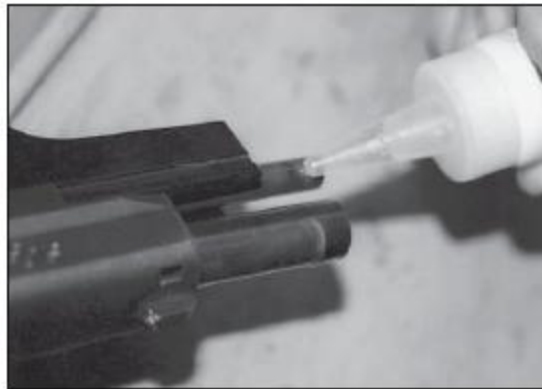
## **Cleaning And Lubrication**

"SIG told us at armorer's school that the pistol should be cleaned every 200 rounds," notes Devoid. From a perfectionist's standpoint, this may be true, and neither I nor this publication will ever suggest more lax safety and maintenance standards than those of the firearm's manufacturer.

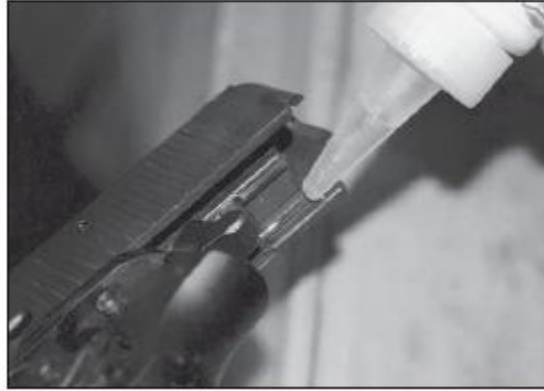
That said, I've seen SIG-Sauer service pistols go between 1,000 and 2,000 rounds without cleaning or lubrication, and still work fine. I put between 1,500 and 2,000 rounds through my P226 at Chapman Academy in their "big dogs" course in 2003 and don't recall cleaning it. The gun never jammed on me once. I see the same high order of reliability in the other SIG duty models, full-size and compact. The only SIG-Sauer I've found to be particularly sensitive to dirt and crud is the little .380.



***Lubrication protocol. You want some oil on the front of the barrel, around the ring of finish wear where it contacts the bushing area of the slide...***



***...put some at the corresponding point on the recoil spring guide rod...***



*...now put adrop of oil on the side and bottom of the slide rails at contact points...*



*...making sure you do the same on both sides...*



*...and on this contact surface of the hammer...*



*...closing the action of the empty pistol, put a drop on the hood of the barrel...*



***... and finish by briskly working the action several times, as demonstrated here by certified SIG armorer Rick Devoid, finally wiping off any excess lubricant.***

Rick suggests that in an intensive training environment, it wouldn't hurt to at least lubricate the gun every few hundred rounds. If your intensive shooting schedule calls for 500 to 1,000 rounds a day, he recommends oiling at least once a day during lunch break. Of course, magazines that have fallen in sand should be attended to immediately. Ditto pistols exposed to sand or mud during grueling on-the-ground exercises.



***Buy your SIG from someone who knows SIGs, and will be available to advise you on things like maintenance. Jim McLoud, owner of the Manchester Indoor Firing Line, definitely knows his SIGs.***

There are more fine gun lubricants and solvents on the market today than ever before. Devoid is partial to Break-Free CLP, Firepower FP-10, and Sentry Solutions for lubrication. “At armorer’s school, we were told that Gun Scrubber <sup>TM</sup> was OK but generic brake cleaner wasn’t,” remembers Rick. “Their point was that if it wasn’t marketed as a gun-cleaning product, it wasn’t a great idea to use it for cleaning guns.” Again, I won’t attempt to gainsay the manufacturer’s suggestions, but the writer can’t help noting a long and satisfactory experience with the much less expensive generic aerosol brake cleaner for getting the crud off.

Rick is a big fan of ultrasonic gun cleaning systems. I recall an article by Wiley Clapp in which his exhaustive testing proved that the use of such a device seemed to maintain maximum accuracy by sort of deep-cleaning the gun’s barrel. Both the SIG Armorer’s guide and Rick Devoid remind us that

since this cleaning process will remove all lubrication, the pistol should be re-lubricated by an armorer after each ultrasonic cleaning. Shooters are reminded that brake cleaners do the same thing.

Devoid and LFI both recommend monthly field stripping, cleaning, and lubrication *even if the pistol has not been fired since its last cleaning*. Most lubricant is liquid; it can evaporate. Liquid has weight: the lubricant can drain from the gun, particularly when it is carried vertically all day in a holster. A dry semiautomatic is a malfunction waiting to occur. “Lack of lubrication is the most common problem you see with a SIG,” observes Rick from extensive experience.

Devoid suggests the following lubrication protocol for routine maintenance. “Put a bit of oil on the barrel, at the ring you see where it contacts the slide. Do the same to the recoil spring guide rod below it, at the corresponding point. Put a big drop on the hood of the barrel, and another on the front edge of the hammer where the slide rides over it. Then oil both the tops and the sides of the frame rails where the slide travels; those are the longest and perhaps most critical set of bearing surfaces on the pistol. Work the slide rapidly a few times, then wipe off the excess.”

Devoid adds, “the factory says to lube it so you can see and feel the lube, and if you’re going to be shooting hot and heavy, lube it so you can see it, feel it, and literally push the lubricant. The hotter the gun gets, the more lubrication it’s going to need.”

## Magazines

Anyone experienced with semiautomatic firearms can tell you that bad ammo and bad magazines are the two key causes of malfunctions. Devoid recommends only SIG factory magazines, period. I would extend that to include SIG and Mec-Gar brands, and the ACT-Mags for the P220 .45 imported by Wayne Novak from Italy. The latter are stiff at first when you try to load the stated capacity of eight rounds, but break in soon enough. I would avoid like the plague any other magazine in the SIG pistol.

Keep the magazines clean. There is something in the psychology of many shooters that tells them to clean their pistol as religiously as they would polish a Rolls-Royce, and to ignore their magazines and treat them like

slaves and drones. Bad attitude. The magazine is the heart of the pistol's feeding system. As the SIG armorer's manual notes, "The pistol is not considered clean 'unless the magazine is clean also'!"

Do not overload the magazine. The 10-shot magazines for the double-stack 9mm pistols, guns designed for higher capacity, hold the stack of cartridges so tightly when fully loaded that there is no flex left inside the magazine when it is slammed home. If the slide is forward when the full 10-round magazine is inserted, it may not seat fully. This writer uses those magazines only for training (if for no other reason that I don't feel bad about ejecting them into the mud) and loads them only with nine rounds to insure positive insertion. The same is true with the old DPS eight-round magazines for the P220. New P220 magazines with eight-shot capacity, distinguished by an extension on the floorplate, are fine when loaded all the way up: it's the payload they were carefully designed for.



***If you want an eight-shot .45 magazine for your P220, get this current-production one, not the earlier "DPS" variation with flush floorplate and a cartridge stack that is tighter than optimal for some purposes.***





***Clean your magazines when you clean your pistol. Armorer Rick Devoid uses a punch to depress the button holding the floorplate of a P226 mag and slides floorplate forward and off...***



***... separating it from its interfacing part, the magazine insert...***

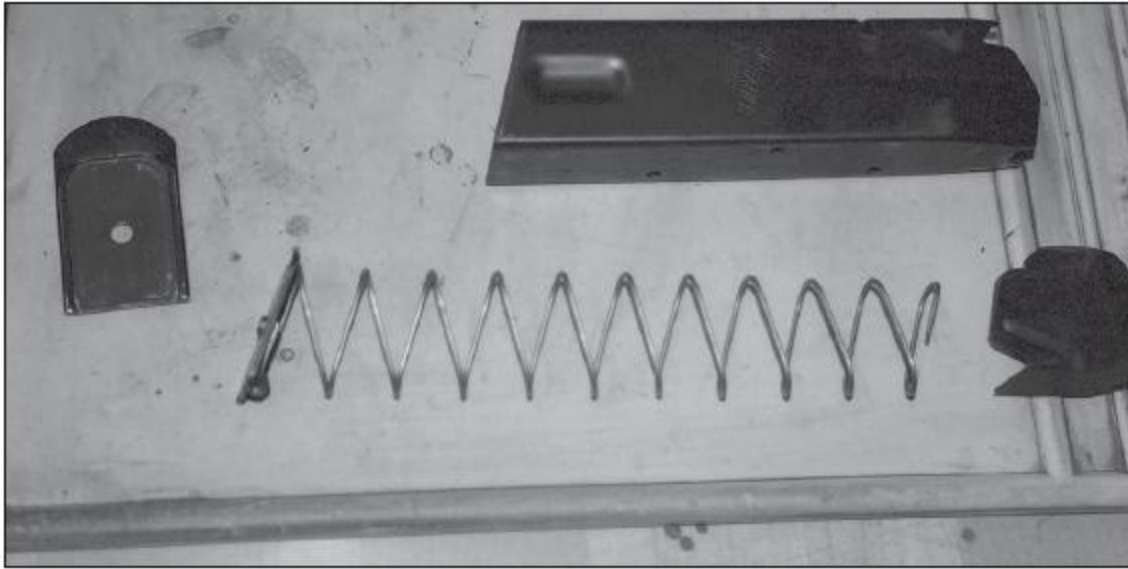
Michael Izumi is a top-level practical pistol competitor, a sworn law enforcement officer and a splendid part time firearms instructor, and works full time as an aerospace engineer with many patents to his credit. They say that you don't have to be a rocket scientist to figure certain things out, but it doesn't hurt, either. Mike literally *is* a rocket scientist, and he did an exhaustive study of fatigue in pistol magazine springs. He determined that it would be wisest to keep his SIG P220 duty .45's magazines downloaded by one round, and to load them all the way up only when he was about to go on duty. He determined that the majority of magazine spring fatigue came from being loaded to full capacity. He likes to download by two rounds when storing loaded high capacity magazines.



***... carefully removing magazine spring...***

When Mike Izumi talks, I listen. I've also gotten into the habit of keeping at least half a dozen magazines for each of my carry guns, since I normally carry three magazines at a time: one in the pistol, and two spares on the belt. Whenever daylight savings time rolls around, I do the bit where we change the smoke alarm batteries when we change the clocks. I also change the batteries in my flashlights, *and I also rotate the magazines of my carry guns*. The ones that have been loaded until now I unload to rest; the ones which have been resting now have their turn to be loaded and carried. You can color code the magazines with little dots on the floorplates: sunshine yellow for summer, snow white for winter.

Clean the magazines when you clean the gun. The armorer's guide suggests a light coat of oil. Personally, I prefer the inside of the magazine to be clean and smooth but absolutely dry. Oil in a magazine, in my experience, becomes a suspension medium for dirt, sand particles, and other debris.



***... and carefully laying component parts in array similar to their working proximity, to insure that you reassemble them correctly.***



***Because it is carried vertically in a holster, liquid lubricant can drain out of a pistol without it having been fired. This is why monthly inspection and lubrication of even unfired pistol should be mandatory for defensive pistol.***

## **Other Maintenance Tips**

Ammunition in the gun should be changed out annually at an absolute minimum. Twice a year is better, quarterly is better yet, and monthly is best of all. Ammo carried on your person, both in the gun and in the spare magazine pouch, is being jiggled around every step you take. Each time a round is jacked into the firing chamber, the bullet is being pressed back toward the inside of the case. It doesn't take long to break the seal, which means the round is no longer waterproof. The bullet can also set back into the case, which will create feeding problems its next time through the magazine. A set-back bullet can also cause pressure to reach a catastrophic point, blowing up the gun. Rounds with the bullets set back visibly should not be fired; collect them, soak them in metal penetrating oil to kill their

powder charges, and bury them somewhere safe. Rounds that have been jacked in and out of the chamber repeatedly which do not show shortening can be set aside for practice later.

Remember that each time you cycle a live round through your pistol, an extractor slides over a rim, the slide hammers the cartridge home, then the extractor pulls it back again and the ejector kicks the cartridge out of the pistol. Little burrs have been made in the soft brass of the cartridge case. These can impair feeding later. Ditto dings on the bullet nose. Remember that “life saving emergency rescue” thing. Ammo that is getting “used up” should be consigned to the training bin, not carried for the protection of innocent human life.



***Beware of human error. The common high-thumb position seen here blocks slide stop lever and prevents it from functioning...***



***... a problem cured by simply going to this low-thumb grasp.***

Don't blame the gun for human error. A limp-wristed grasp is notorious for jamming semiautomatic pistols. The SIG-Sauer is much more forgiving than most brands in this respect, but that doesn't make it immune.

The single biggest complaint I hear, always from right-handed shooters, is "My slide won't lock back when the gun is empty." Nine times out of 10, it turns out that they are using a high-thumb grasp in which their own thumb is holding down the slide lock lever and preventing it from engaging when the pistol runs dry. Lowering the thumb will solve this problem, and may even enhance shooting with the stronger grasp it provides.

Use screwdrivers of the proper size for removing stocks. Improper head size can lead to ugly, "boogered up" screw heads. The SIG armorer's manual stresses the importance of using a short screwdriver for this task, since long ones can generate enough torque to strip threads.

One irritating idiosyncrasy in all SIG-Sauer pistols, though somewhat less common in the most recent ones, is the tendency for the grip screws to work loose. Check regularly to make sure they're reasonably tight, and do so several times a day in a heavy training session on the range. Some enthusiasts tell me that hex-head aftermarket screws solve the problem. If you go that route, be sure to keep a hex-head screwdriver handy on a keychain or multi-tool.

Be advised that some aftermarket grips can impinge on the function of the springs that flex between frame and stock. One particular brand of "rubber" grips has been implicated in this. If you prefer this type of grip, I would recommend the Hogue brand for the SIG, never having seen it cause any problem with these guns.



*Use proper size screwdrivers. This grip screw has been “boogered” by using a screwdriver with too small a head.*



***Some SIG enthusiasts install their own screws with factory stocks in hopes that they'll be less likely to work loose, as on this P220 American .45ACP.***

If you neglect or abuse the finest human, dog, or horse, it can turn on you. Ditto the finest machine. Give your SIG-Sauer pistol the professional level of care and maintenance it deserves. You take care of it, and it will take care of you.





*Note that the SIG-Sauer mechanism has springs that flex in places between the frame and the stocks. Aftermarket stocks with improper inside dimensions can compromise the function of the mechanism.*

## Chapter 17



### *The Custom SIG*



**W**hen we try to improve on the truly beautiful, we are said to be gilding the lily, and it is implied that this is a bad thing. Well, we can debate that. Certainly, gilding the lily is probably an *unnecessary* thing. But sometimes, a master craftsman can take something that is excellent and enhance it until it is truly sublime.

There are a very few craftsmen who can do that with SIG-Sauer pistols.

## What Could Be Better?

You'll find those enthusiasts on internet chat rooms like SIG Forum who feel that the pistol in question is the *ne plus ultra* as it comes out of the box. The fact is, though, there aren't a whole lot of things that can't be made better. That includes the SIG-Sauer pistol.



*Stocks by Nill. Sights by Heinie. Slide stop, magazine release, and magnificently reworked trigger and action by Ernest Langdon. Result: The SIG the author most often carries on his own time.*

## Sight

Sights are a highly subjective topic. SIGARMS has offered a decent adjustable sight, excellent fixed night sights, and even the XS, as Ashley Emerson's "express" pistol sight is now known. Most models are compatible with some sort of laser sight if that's what pulls the given purchaser's trigger. The P226 and P220 ST are produced with an attachment rail for white light and laser units, and the white light in particular makes

eminent good sense for certain tactical situations, including the home-defense gun. But there are some other, more conventional sights that some of us prefer. The excellent fixed night sights by Heinie are my personal favorites. I know experts who prefer the MMC adjustable night sights. Many of my SIGs wear Trijicon fixed night sights, and I've found them to be excellent. I've also had good luck over the years with IWI night sights, and recently, with the Meprolight. Novak fixed sights are the choice of a number of professionals. I've even seen oversize target pistol sights fitted to SIGs, though for concealed carry or duty use I think they go past the point of diminishing returns.



***Note the rounded surface and edges of the short SIG trigger installed in this P220 ST by Ernest Langdon. For maximum performance when hand meets machine, little things mean alot.***



*These high-tech adjustable target sights would be great for a bull's-eye match, but notice the sharp edges and protrusion: not terribly practical for defensive carry.*



***SIG-Sauers have traditionally come standard with these fixed sights in the Von Stavenhagen pattern: white vertical dot at the back...***

One under-recognized advantage of night sights is that if you are awakened in the darkness by home invaders, the glowing sight dots catch your eye instantly and guide your hand to the pistol like airstrip landing lights. SIGARMS offers their own night sight options, factory order or retrofit, under their trade name "SIGlite."

When the mission profile indicates pure close-range shooting done very fast, the XS sights originally designed by my friend and student Ashley Emerson as the Ashley Express are a useful special-purpose option. Not what you want for a 25-yard medulla shot, these get you into the vital zone very fast even with the eye focused on the opponent when you're in close. SIGARMS has recognized this, producing one special run of P245 pistols with XS sights.

***...and round white dot at the front. The quick-sighting principle is to "dot the i." Of course, a conventional post-in-notch marksman's sight picture is***

*also possible with these.*



Laser sights? I think they're over-rated in terms of their ability to deter a violent aggressor by simply putting a red dot on his body, though there is ample testimony that this has indeed happened on some occasions. They are ideal, however, for shooting from behind a hand-carried ballistic shield, or "body bunker." They can be a valuable adjunct in a wounded officer situation where the gun can't be raised to line of sight, and can be the answer for the small number of people whose vision is such that they can identify their target but can't focus on conventional gun sights.



*Left: two of the three glowing green dots of Trijicon replacement sights, which author loves. Right, the not-yet-dotted “i” of the “dot the i” Von Stavenhagen sights. Pistols are P226 9mms.*

*A shallow “V” rear and huge white dot up front comprises Ashley Emerson’s concept when he developed these “express” sights, now marketed by XS. Deadly accurate in close and faster than regular sights, they are more challenging at greater distances. The pistol is one of a small number of P245s equipped with XS sights at the SIGARMS factory.*





Laser sights are great for marksmanship training, because they show the student in dry fire if he is jerking the trigger. Working in reverse, laser sights can help teach good trigger control when the student learns to hold the dot motionless on the target while the index finger strokes the trigger back. In live fire the bouncing of the red dot on the target, particularly at night, has what I call a “graph effect” to gauge recoil control, because the bouncing red dot traces a red line downrange as the pistol kicks.

The SIG rail guns can take lock-on accessories such as the InSights M6, a combination white light and laser sight unit. Most of the SIG pistols will accept the LaserMax, which replaces the recoil spring guide and projects its dot from beneath the muzzle. It is activated by a push button on either side of the frame, thanks to a module that replaces the takedown lever. Crimson Trace makes its excellent LaserGrips for a variety of SIG-Sauer pistols. This unit replaces the stocks and projects its beam from the upper portion of the right grip panel. It is adjustable. I adjust mine to send the red dot parallel to the barrel, which is above and to the left of the projecting lamp. I now know that the bullet will always strike about an inch above the dot and half an inch left. Sighting in any laser sight to exact point of aim point of impact will put the bullet on the dot only at the same, exact distance at which it was sighted in. Closer or farther, dot will diverge from bullet strike.



*The P245 at left has the standard three-dot SIGlite night sights. The P245 at right has XS sights. SIGARMS Academy's ace instructor and shooter George Harris has shot slightly better with the XS sights on the steel targets.*



*The Big Dot™ of the XS sight comes quickly in line with the eye as George Harris cracks off a .45 round at close range from a P245. Note his excellent control of recoil.*

## Grips

Hogue grips may give the shooter a better interface between operator and machine. SIGARMS apparently thinks so; they've equipped some of their pistols with them from the factory. So might a rubbery grip sleeve, as

produced by Uncle Mike's, Hogue, and others. With that attachment, be careful that it doesn't work its way down the grip-frame to where it can block insertion or ejection of a magazine. You want fancy yet functional? Can't beat K.G. Nill's handsome checkered wooden stocks from Europe. SIGARMS thought enough of 'em that they had some made with the company logo.



*A LaserMax unit replaces the recoil spring guide on this SIG P228.*



*IDPA Stock Service Pistol Master Steve Sager demonstrates the use of the Crimson Trace LaserGrip for dry fire practice and diagnostics with a P226.*

## Other Accessories

Magazine extensions can be useful and SIG offers some. Let's say you have a compact SIG and want to use the longer, more capacious magazines of its larger counterpart. A P228 will take a P226 magazine. However, some worry about it overtraveling and locking up the gun. This happens to single-stack magazines, but not to double stack SIGs in my experience, because the taper of the mag at the top prevents it. So, maybe you worry about using your P220 mag in your P245 compact, or maybe you just don't like the feel of a too-long magazine hanging out under your pinkie finger. Solution: SIG inserts that encircle the body of the longer magazine above the floorplate, filling out the grip shape to the exact dimension of the larger pistol. These also give you the advantage of having "two grips in one." Let's say you are comfortable accepting a six-round .45 mag in your P245 or a 13-round mag in your P228 in return for a lower concealed carry profile. But, you would really rather have a full-length grip for more comfort and control when you come home and turn your carry gun into a home-defense pistol. No prob. A simple tactical reload, and the insert-equipped longer magazine is now inside your "bedside home companion," which has assumed the configuration of a full size pistol with a shorter barrel and slide.

***Heinie Straight Eight™ front sights, here installed by LTT, encompass the superb Trijicon night sight concept.***





*The lens of a LaserMax is seen below the muzzle of this P226.*



*The swelling at the top of the grip panel is the laser mechanism of the LaserGrip. Note the groove cut away to prevent deflection of the laser beam.*



*This P226 wears Crimson Trace LaserGrips. Activator is the button seen behind the magazine release button. It is activated by grasp, with left or right hand. The tiny switch visible at the bottom rear of the butt allows the device to be turned off if accidental activation becomes a tactical concern.*

## Pistolsmithing

Some gunsmiths offer a “dehorning” or “melting” job on auto pistols. There are some that can certainly use it. About the only part of a SIG-Sauer that ever seems to need smoothing is the lower outside edge of the trigger guard, and then only for certain hands where it bites in after long, *long* shooting sessions.

Many auto pistols need to be “throated” to feed blunt-nosed rounds. Fortunately, this is not normally the case with SIG-Sauer pistols. That’s taken care of at the factory. I can only think of two exceptions. If you wanted to set up a SIGARMS GSR 1911 as a target pistol with the odd-shaped 185-grain mid-range wadcutter bullet, then in addition to a new, much lighter recoil spring, you would probably need a little more radiusing

at the top of the feedway. The 1911 pistol has a more angled feedway than the almost straight-line feed of the SIG-Sauer, and this may have to be compensated for. On the older P220s with the early seven-round magazines, it would occasionally happen that a reload from slide-lock with a very wide-mouthed bullet such as the 200-grain Speer “flying ashtray” would cause a 6 o’clock misfeed. This seems to have cleared up with the new P220 magazines built by Mec Gar, but if you have a P220-E or Browning BDA whose butt-mounted magazine release restricts it to first-generation magazines, some additional throating may be necessary to speedload with very short, very wide .45 ammo.



***A press of the button on the replacement takedown lever activates this P228's LaserMax dot.***





*Hogue grips have been popular for a long time among SIG shooters, and have been provided by the factory on some models.*



*Nill stocks fill out the shape of a P220's grip-frame nicely.*



*Some handgun grips are not compatible with the SIG's mechanism. These Hogues are compatible and factory-approved.*



*The author is perfectly happy with grips currently provided on SIG-Sauer pistols.*



*Smart, purpose-driven accessorizing in action. Pre-ban extended SIG magazine, M3 light, and SIGlite night sights have turned this P226 “rail gun” into a 21-shot weapon which enhances the holder’s tactical control capability. Light attachment and tactical reload together take only a few seconds to change the face of the firearm.*



***If your standard P228 is a little short in the grip, the optional magazine from SIGARMS shown next to the gun can give you more to grasp.***



***A P245 with a six-shot magazine in place is next to an eight-shot P220 mag with SIGARMS optional insert...***

Finish is a concern. SIG has addressed this. The original phosphate-finished steel and anodized aluminum frame worked well enough for most. However, some combinations of user, carry method, and environment were such that brown spots would appear on the barrel and slide, and constant wear would take the finish off the frame. Robar, Accurate Plating and Weaponry, and countless other aftermarket vendors can give you superb finishes that resist the elements and look great. Hard chrome, Teflon, you name it. SIG itself has offered its guns with electroless nickel finishes, and late in the SIGARMS epoch offered stainless. I never particularly cared for the slick “K-Kote” finish SIG offered, but many thought it was the cat’s meow, and I certainly have no problem with it. I appreciate stainless steel as much as the next guy, but frankly, for this writer’s needs the standard factory finish has always sufficed. Still, particularly in the case of finishes,

whether or not a golden lily is more visually appealing than a natural one, it will probably prove to be longer lasting.

Custom barrels for greater accuracy? I tried that...once. John Quintrall expertly fitted one of Bar-Sto's superb barrels on my favorite P220-E. It was very accurate indeed...but I can't say it was more accurate than the typical P220 barrel new from the factory, because that is also match-accurate. I have numerous 1911 and other pistols with Bar-Sto, Jarvis, and Storm Lake barrels, and the fact is that the properly fitted aftermarket match barrel improved the accuracy of every one. A Bar-Sto or other top-quality match barrel might improve the accuracy of some SIG-Sauer pistols. It's your choice.



***... which, in place, creates a short barrel .45 holding 9 rounds fully loaded with an improved feel in most hands. A tactical reload has turned a fine concealed carry gun into a better home-defense gun.***



*The extended floorplate available from SIGARMS better fits this P228 to a larger hand.*





*With one of SIG's "rail guns," home-defense capability is enhanced with the easily attached and detached InSight M3 high-intensity flashlight. The rocker switch at the rear activates the light in "dead man's switch burst mode," or it can be locked on.*

*The "business end" of the author's Langdon Custom P220 ST .45. Jeff Cooper's formula of DVC – "Diligencia, Vis, Celeritas" or "accuracy, power, speed" – are all there.*



To my mind, the trigger mechanism was where custom attention seemed most important. Given that historically, the SIG has been the traditional double-action auto pistol by which the trigger pulls of others were judged, this seemed to be *truly* gilding the lily. The fact is, however, the best trigger somehow never feels good enough for the truly driven pistol shooter. The SIG-Sauer is a mass-produced firearm. Intensive polishing and certain subtle changes in parts geometry can indeed give both a smoother and a



lighter pull to what is already the gold standard. If the out-of-the-box SIG is the gold standard, the very best custom jobs might be called the “platinum standard.”



***George Harris demonstrates the advantages of a laser-sighted pistol from behind a body bunker. Note the almost complete absence of body exposure, while he can effectively target the opponent by watching the P226's LaserMax-dot through the bullet-resistant viewing port. Photo taken at SIGARMS Academy.***

One aftermarket touch that can be critical to many shooters is the installation of SIG's own short trigger. This does not involve a change in the mechanism per se; the part in question is simply the standard trigger with more metal taken off the front so the finger does not have as far to reach. It is a Godsend to petite females, and a huge advantage to anyone with short fingers. This writer has “average adult male hand dimensions” according to the \$100,000 study commissioned by Smith & Wesson for their Sigma project in the early 1990s. I have found that I shoot better with

the distal joint of my trigger finger making contact with the trigger, particularly in double-action pistols and revolvers. This means that for me the shorter trigger is the logical choice. Give one a try; you may discover the same. Any qualified SIG armorer can install one. If you don't have one handy, feel free to use the highly experienced armorer I work with, Rick Devoid at Tarnhelm Supply, (603)795-2551, [www.tarnhelm.com](http://www.tarnhelm.com).



***SIG has offered some interesting finish options, including this limited run. In an “open carry” state, is it “concealment” if you wear this particular P228 exposed and dressed in matching camo? Do not tell the author that SIGARMS does not have a sense of humor.***

Let's take a look at the work of one true master craftsman of the SIG-Sauer custom duty pistol. Ernest Langdon is in practice as I write this, and he offers many insights to those who want maximum performance from a SIG.

Before we segue in that direction, though, let's touch on one more accessory that isn't even part of the gun. It's always smart to own a dummy

duplicate of your carry/defense pistol. Use it for practicing disarming and handgun retention. Use it for initial practice with draws, new techniques, and other complicated maneuvers. Use it for introducing new shooters to your gun. If they accidentally “cross” you with the muzzle of even an unloaded real gun, they can find it traumatizing; the dummy gun gets both instructor and student through such growing pains. Finally, when water-soaking your fine leather holster to a perfect fit on your pet gun, you’ll almost wake up screaming as if you could hear your gun rusting in the other room, grease and Saran Wrap notwithstanding. Wet-mold your new holster to your dummy gun instead, and take the worry away. Ring’s makes the best plastic dummy guns I’ve seen, but I prefer the more “real gun” heft of the rugged metal ones from Odin Press of Kansas City.



***The short trigger gives the author perfect trigger reach on the P220 ST customized by Langdon Tactical Technologies.***



*For many, this is the most important accessory. Left, short trigger; right, standard trigger, both produced by SIG.*

*The short trigger rests atop the long one. In the hand, the difference feels like much more than what it appears to the eye.*



*An important accessory for any handgun is a matching dummy gun. Odin Press in Kansas City produces this heavy-duty metal duplication of the P226. It shows years of constant wear and tear.*

## Chapter 18



### *Competing with the SIG*



**T**he SIG-Sauer pistols were designed for service, not sport. That said, they have performed remarkably well in the practical pistol competition arena.

The guns were built to be accurate, reliable, and ergonomic. If you think about it, those are three essentials for winning a match, too. With the clock running, you don't have time to re-grip a pistol that doesn't fit your hand; the SIG is a natural pointer and famous for its good feel in the hand. With the sights on target and that same clock still running, you can't

afford a crappy trigger pull that might pull your shot off the center of the mark and cost you so many points that you lose. The SIG-Sauer designs are famous for the quality of their trigger pulls both double-action and single. And, if you have to stop to clear a malfunction, you're in the tank *big* time. The same reliability that makes the SIG a favorite among the cops makes this pistol a top choice for any shooting match the competitor takes seriously.

Let's look at how the SIG-Sauers have performed in various "combat competitions." Not designed for bull's-eye or Olympic sports, these guns are not seen there. It is in the martial arts side of shooting tournaments where you'll find the SIG-Sauers in play.

## **IDPA**

The International Defensive Pistol Association is in many ways what Jeff Cooper originally intended IPSC to be. Only "street guns" are used, in practical holsters, generally worn concealed. The most popular of IDPA's four different gun categories is Stock Service Pistol, encompassing double-action autoloaders such as the SIG-Sauer as well as pistols like the Glock.

The man who has won the national championship in this category more than any other is Ernest Langdon, formerly a Marine teaching in the high-risk personnel program. He began with the Beretta 9mm auto, just like the one the Marine Corps had issued him, but in 2003 he switched to the SIG P220 ST .45. Now, in IDPA cocked and locked 1911 .45s are seen as easier to shoot than TDAs with the first shot double-action, and they are shot in separate categories: Custom Defense Pistol for 10mm and .45 1911s, and Enhanced Service Pistol for such guns chambered in 9mm or .40. Marksmanship categories are adjusted accordingly. To qualify as a Master in Stock Service Pistol, you need to complete the tough 90-shot Classifier course in 98.82 seconds or less. However, in Custom Defense Pistol, you need to race your single-action .45 auto in 91.76 seconds or less, and in Enhanced Service Pistol, 89.41 seconds or less.



***Street cop, SWAT trainer, and adjunct SIGARMS Academy instructor Scott Reidy wields a 9mm P226 to good effect at 2003 IDPA Mid-Winter Championships.***



***Todd Green is one of IDPA's consistent top shooters. His match pistol is the same P220 .45 he is licensed to carry on the street.***





***Bill Goldstein uses a hard-chromed P220 .45 on a long-range “standard exercise” in an IDPA championship.***

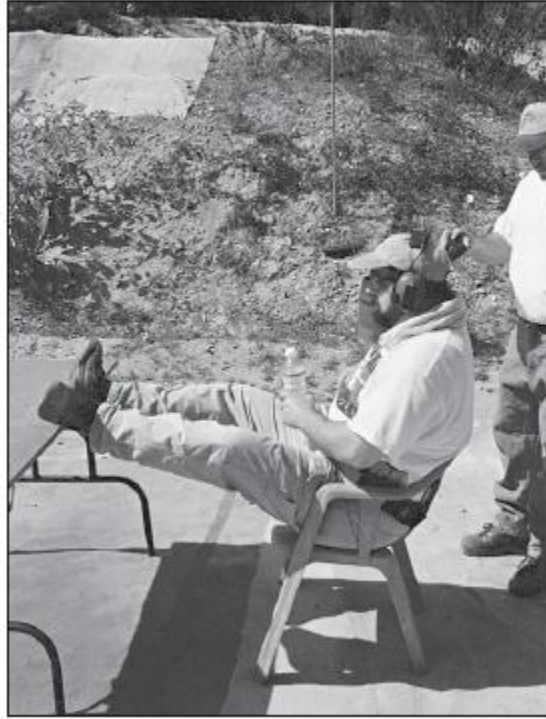


***This shooter uses her SIG P229 .40 to good effect in the New England Regional Championships of IDPA, 2003, on a weak-hand-only stage.***

This reflects the conventional wisdom, and collective experience, that one can shoot faster and straighter with the short, easy trigger pull of a pistol that is cocked for the first shot than with one that must be trigger-cocked by a long, heavy double-action pull. However, Ernest Langdon has defied that conventional wisdom.

Throughout 2003, he shot his SIG P220 ST .45 in CDP class, against the cocked and locked 1911 automatics. He came in First Master at the Mid-Winter IDPA Championships hosted by Smith & Wesson in Springfield, Massachusetts, and stayed on a roll for the rest of the year. He romped all of us at the New Hampshire State IDPA championships and won pretty much every other IDPA match he shot. His winning streak culminated in October of 2003 when, still shooting his SIG, he won National Champion CDP at the IDPA Nationals.

Ernest did this firing double-action for the first shot every time he drew the big SIG from his Kydex holster. You see Langdon has discovered something that a lot of people who use a light, easy trigger pull as a crutch have missed. So long as the trigger pull is smooth, a double-action gives you more of a surprise break than does the “glass-rod-breaking” let-off of a cocked target pistol. This is why the best PPC masters shoot their revolvers double-action all the way through their course, including the 50-yard stage where they are allowed to cock their hammers to single-action mode if they choose. Why not go double-action-only? Langdon goes for speed, and the longer trigger return plus the longer pull for the next shot add up to more distance traveled by the trigger finger, which in turn adds up to more time consumed. With traditional double-action, Langdon squeezes off the first double-action shot starting as soon as the muzzle is downrange. The trigger is thus “prepped” as he is coming up on the target, and that first double-action shot breaks at about the time the sights have arrived where he wants them. Now the relatively short travel of his trigger re-setting to single-action for each subsequent shot can be taken advantage of for an extremely fast string of fire. Ernest adjusts his guns at about 6 or 7 pounds pull weight for double-action, and 3 pounds for single-action in a match gun. For the street, a Langdon SIG action will have the same sweet double-action pull, and about a 4-pound let-off in single-action.



*IDPA often makes you start in awkward everyday positions, like leaning back in a chair with a bottle of water...*

## IPSC

The International Practical Shooting Confederation, developed in 1976 by Jeff Cooper, has turned into “track and field with a pistol” in the open class events. One needs a tricked out target pistol with an extremely light single-action trigger pull to be competitive in this arena. However, in a return to its roots, IPSC has begun a factory-production gun category that initially is proving extremely popular. Shooters are limited to double-action guns, including Glocks.

Here, too, Langdon has done well with his P220 ST. In a typical match, it will come down to Dave Sevigny with his Glock 34 9mm target gun dueling with Ernest Langdon and his double-action SIG .45 for determination of the overall winner.



*...before you have to react and engage with your carry gun, in this case a SIG P220 .45 auto. Scene is New Hampshire State IDPA Championships, 2002.*

## **PPC**

Once the realm of purpose-built custom target guns with massive heavy barrels and sight ribs, the Police Pistol Course as run by the NRA Competitions Division has evolved much more toward semiautomatic pistols. Of particular interest is the Service Automatic event, which forbids sight ribs, recoil compensators, and other “game” paraphernalia.

In 2000 Mike Talbert, a SWAT sniper, joined the Richmond (VA) Police Department Pistol Team to compete at the NRA’s National Police Shooting Championships in Jackson, Mississippi. For the open class events the team used 1911 9mm target pistols custom built by the department’s own Jerry Keefer, who is truly a master pistolsmith. They kicked butt with these guns. However, the story on point to this book is that Talbert also won the Police Service Automatic National Championship.



***This PPC stage required six shots from the leather at 50 feet in 12 seconds. Winning target is shown, 58 points out of 60 with only one hit outside the 10-ring of miniature silhouette. Pistol is 9mm P226.***

The gun Mike Talbert used to become national champion was a bone-stock, out-of-the-box ***sig pro*** in .357 SIG. The ammunition, like the gun, was out-of-the-box department-issue: the 125-grain Speer Gold Dot jacketed hollow-point. He outshot men with custom-barreled Glocks and S&W Performance Center 5906 PC pistols costing two or three times as much as the ***sig pro***.

In PPC, the time constraints are not so tight as in IPSC or IDPA. One works on a fixed time schedule for each stage. Not slow fire, but not quite hyper-speed either. There certainly isn't time to clear a serious malfunction and still get a winning score. The extreme reliability of the SIG came through for Mike Talbert, and so did the excellent factory trigger pull, and so in particular did the inherent accuracy of the SIG pistol.



***P226 9mm has easily “cleaned” the 7-yard stage, 12 shots in 20 seconds, at Boston Gun and Rifle Club indoor PPC match.***



***Barricade shooting is a key component of PPC, with the left hand always controlling the gun on the left-hand side. SIG’s controllability is a big help here.***





***Sitting position is part of the PPC course of fire, accomplished here with 9mm P226.***

It should be noted that in IDPA, the standard target is a cardboard silhouette whose maximum five-point zone is a circle in the chest measuring 8 inches in diameter. In IPSC, the standard target is similar in configuration but with a center five-point zone measuring about 6 inches across by 11 inches in height. But in PPC, the target is the B-27, whose center X ring is an oval measuring only 2 inches wide by 3 inches high.

## **Report From The Arena**

When I test a gun for a gun magazine I like to shoot a match with it. The score measures the shooter subjectively more than it measures the capability of the gun objectively, but even so, a good combat match is a microcosm of a gunfight and teaches you things about a given pistol's handling.

One thing the matches have taught me about SIG-Sauer pistols is that they are reliable and consistent, and built for good handling under stress. I remember the day when legendary modern gunfighter Jim Cirillo and I were on the same squad at the first Bianchi Cup and walking from the Barricade Event to the Moving Target Event. Jimmy commented that he was feeling more stress than he ever felt in any of his gunfights. The reason was that here, as opposed to the street, there was ample time for the pressure to build, and the prize-rich Bianchi Cup, which became known as "the Wimbledon of pistol shooting," was nothing less than a pressure cooker.

The Bianchi Cup was geared more for target guns than street guns, but the SIG was capable of doing well there. Ernest Langdon proved it in the Stock Gun class, and years before, gun writer and U.S. Customs Agent Seth Nadel proved it when he shot his SIG .45 there and did quite well. Seth's gun was either a P220-E or a Browning BDA if memory serves. Since there are no speed-reloading stages in the Bianchi Cup, the butt-heel release of his older-style SIG .45 did not slow him down at all.



***An extended magazine and attachable M3 light make this P226 9mm “rail gun” ideal for certain tactical competitions.***

Another event that can raise the old blood pressure is the National Tactical Invitational, which is partly a contest and partly a training experience. The demands are so intense that it can get a little dangerous – one year, a range officer was accidentally shot by a contestant, fortunately surviving – and usually three out of ten scenarios will involve live role-play in which contestants and training role-players shoot at each other with Simunitions™. Those paint pellets can sting and draw blood, and a day at the NTI is definitely going to give you your daily adrenaline requirement. For many years, SIG-Sauer pistols were what we were issued for Simunitions sessions, and the gun’s shootability and good human engineering for use under stress was reinforced in that environment. At least one year, military spec-ops instructor John Hoelschen won the event, using his personal SIG P228 in the live fire portions of the program.





***On the signal, Officer Scott Reidy drops to rollover prone position and successfully engages three distant targets with his P226 during the Mid-Winter IDPA Championships.***



***The author bolts from a chair as the timer behind him starts a “home invasion” drill. The finger can safely enter trigger guard as he brings the downrange-pointed P226 up...***



***...rapid firing on the run...***



***...and nailing targets close and far. Scene is 2002 Southwest Regional Championships of IDPA.***

In September of 2002, in Phoenix to speak at the Gun Rights Policy Conference, I learned that the IDPA Southwest Regional Championships were going on in the city. My friend Kate Alexander was one of the people running it, and I sneaked away Friday afternoon to shoot the match with her and the range officers before it was opened to contestants over the weekend, days I did not have free. The carry gun I had brought with me was a SIG P226. The plan was that I would buy some 9mm ball ammo from shooters who hopefully had some extra, since I didn't have enough of my Winchester SXT Ranger 127-grain +P+ carry loads to shoot through the whole tournament.

Phoenix is home turf for some of the best practical shooters in the world. Robbie Leatham and Brian Enos are two legendary names that come to mind. Would I be able to shoot an outof-the-box SIG service pistol

creditably against such lofty competition as I could expect there? I was about to find out.

The first stage I found myself on began with the shooter seated when home invaders kicked in the doors. Since this was a home-defense scenario, it was one of the few stages where a concealment garment didn't need to be worn over my inside-the-waistband holster, a Ted Blocker LFI Concealment Rig. As the buzzer of the electronic timer signaled the start, I sprang from the chair, moving forward as I drew and fired. With the double-action pull of the SIG, I felt safe in prepping the trigger as soon as the muzzle was downrange, and I cracked off the first shot as the front sight hit the middle of the silhouette. The second shot came instantly behind it. With the trigger finger placed on the trigger at the distal joint for maximum leverage, transition from the double-action first shot to the single-action follow-up was instantaneous. Most of the rest of the targets I shot on the move, saving time. To keep the gun from bouncing, I bent my arms into an approximation of a Weaver stance, creating a shock absorption effect that kept my sight picture on the targets as I ran. This bends the wrists, and some auto pistols jam when held with anything but a locked wrist. Fortunately, a SIG-Sauer doesn't. I finished the stage in good shape.



***From behind replicated cover, the author returns to a ready position and decocks after completing a stage in the dark at Southwest Regional Championships. On the table is his InSight M3 light used to illuminate the target array.***

And so it went. The P226 had come out of the box with its fixed SIGlite night sights dead on for point of aim/point of impact. This helped a great deal on some tough shots where the bad guy was behind the good guy and only a sliver of the “opponent’s” head was visible. The SIG’s sweet trigger did the rest: when the pistol barked, the shot went true.

Unfortunately, no pistol comes with a tactical computer installed. On one stage I shot the targets in the wrong sequence, costing me a relatively huge penalty of time added to my score. My fault, not the SIG’s.

Night fell. The range crew was trying to shoot in an afternoon a long course of fire intended for a whole day’s shooting. They would complete the rest during breaks over the next couple of days. However, I couldn’t get back to do that, so it was decided that I’d finish shooting in the dark.

There were three stages left. On one of them, there was still enough light in the heavy dusk to distinguish the target array. The glowing green tritium dots of the SIGlite sights allowed me to pretty much clean the targets, with a nearly perfect score accomplished in a decent time. By the time they were scored, though, the sun was truly below the horizon, and it was unscheduled night shooting from there on.

My SIG P226 was the latest model with frame rail for attaching flashlights. Since this was supposed to be a daylight stage, allowances were made. I set my InSight M3 attachable light on a table to light up the left side of the range, and took the SureFire 6P high-intensity flashlight from its belt holder and lay it down to illuminate the right side. I was able to finish this next to the last stage with a decent score.

The final stage required the shooter to pick up the gun from the table. Since this was not designed as a night shooting stage and would be fired in daylight by the other competitors, I was allowed to start with the M3 light already attached to the P226. The illumination was bright enough that I felt as if I was shooting in daylight, and the intense white light on the target gave me a silhouetted sight picture that was crystal-clear.

We finished the match. I reloaded for the street with +P+, being legal to carry in Arizona, and thanked everyone for a splendid shooting tournament. A few days later, when it was over, Katie Alexander told me I had come in fourth. Against the high level of competition there and under the circumstances, I was grateful for that finish.

But the bottom line was, the SIG pistol had proven to me yet again that, although built for the battlefield and proven on the street, it was also absolutely “match-worthy” for practical pistol competition, right out of the factory box.

## Chapter 19



### *The SIG in Training*



**A**ny tool requiring a responsible hand at the controls is a tool that cries out for training. The handgun is no exception. While the SIG-Sauer pistols are easier to learn to operate safely than many others, this doesn't mean that their selection eliminates any need for training.

I have observed these pistols in the training environment for hundreds of thousands of rounds. An instructor since the early 1970s and for more than 20 years full time, seeing 10,000 bullets or more go downrange in a given week, I've had the opportunity to examine the SIG-Sauer in training from every perspective; as the instructor, as the student, and as the evaluator of



the class. I've learned some interesting things about these guns and how they interface with the students who learn their use.



*SIGs are used by a number of the LFI staff as teaching guns, the author included.*



*Teaching in Michigan, the author uses a field stripped P226 to make a lecture point.*



*Author finds en bloc disassembly of SIG-Sauer lends itself to certain learning points...*



*... such as the tactical reload...*





*... because students can see what's going on from the front, safely, without being "crossed" by an actual gun.*

## **Teaching With The SIG**

Back in the 1970s, I taught with either the department-issue service revolver or the Colt 1911 .45 auto. Time went on. The serious police switch to autos began in the 1980s, with the SIG P226 taking an early lead in popularity in many parts of the country. I was seeing more of them in classes, so I picked one up. Nice little gun. The trigger reach was longer than I liked, but overall I was quite happy with the pistol, and taught with it for quite a while. Then I bought a P220 .45 and liked it even better.



***The instructor carries a gun all day, every working day, and often has only the same gun to carry “off duty” when traveling. The smooth edges and light weight of this SIG P226 make that easy. Holster by Don Hume.***

By the 1990s, I had gotten into my current habit of using different guns on each road trip or “teaching cycle.” The students after all had Beretta, Glock, H&K, Ruger, SIG, and S&W pistols for the most part, along with revolvers and 1911s, and I had to stay current with all of them. In no particular order I’d do a couple of weeks on the road with a Beretta, then come home and switch to the SIG for the next cycle, and so on, including the revolver at least one week a year. I learned that any week I was teaching with a SIG would be a week when I wasn’t going to have gun trouble. I learned that when I shot a demonstration for the students, the gun would never embarrass me, and neither would the score.

It’s worth emphasizing that last point a little bit. I’ve paid my dues in the competition arena. I’ve shot in several Bianchi Cups – fired the first shot at the first one, as a matter of fact, and have the “Silver Bullet Award” to prove it – and when commentators called it the “pressure cooker” of competitive handgun shooting, I never argued the point. But I can tell you,

the pressure you feel when a bunch of students, who paid you to teach them to shoot, are looking at you on the firing line and thinking, “Let’s see if he can practice what he preaches” challenges the pressure of The Cup. At moments like that, you *do* want a gun that works, and you *do* want a gun that always delivers.

There are some things with a gun – the draw, for instance – that are best seen from the front, and for that I bring a dummy gun with which to demonstrate. But there are some things you can’t teach with a dummy gun, such as speed or tactical reloading. For that, I simply fieldstrip my teaching handgun. An advantage of the SIG-Sauer for this is that it comes apart *en bloc* into two main sections that stay together. I can simply put the top half of the gun in the pocket of my BDUs and use the bottom half for the demo. Unlike some other autos, there’s no slide stop that’s going to get lost or misplaced, and the parts won’t fall out of the assembly and into the sand or mud of the range.



*Whether sleeping in hotel room after teaching class or doing night shooting on the range in student mode, author appreciates the light*

*attachment option of SIG “rail guns.”*



*Knowing you can deliver a group like this at 25 yards gives confidence to instructor and student alike. Ayoub shot this group in front of a Virginia class, Pro-Load +P 115-grain 9mm duty ammo from P226.*



***The “Big Dogs” class with the Chapman Academy staff who taught it. At far left front is John Skaggs, current chief instructor.***



***“Shootability” of the SIG is appreciated when a student has to fire from awkward positions like this one at a Chapman Academy advanced course.***

The instructor’s teaching gun is his carry gun when he is on the road doing this work. I put mine on when I dress in the morning, and don’t take it off until I go to bed at night, except to shower and change between the end of class and supper. If I go out for dinner, I don’t leave guns in an unattended hotel room. The modest weight of the typical SIG-Sauer makes it easy to wear constantly. Similarly, its lack of sharp edges provides for all-day carry comfort.

Over the last few years, I’ve gotten into the habit of wearing the SIG P220 .45 to class when I’m on my home turf, and carrying the SIG P226 9mm instead when I’m on the road. A box of 115-grain 9mm rounds simply weighs less than a box of 230-grain .45 cartridges, for one thing, and I put at least my carry ammo in the luggage. When I buy practice ammo locally, 9mm is distinctly cheaper than .45.





***“Pointability” of SIG is an advantage in fast, close work. With the SIG below the line of sight, Ayooob nails a Pepper Popper (note that target is blurred by movement) as he jumps from a car in night “ambush” drill.***

Since 9/11/01, I’ve had another concern. We recall how long the airports were shut down after the nightmare at the Twin Towers. My wife and older daughter were on vacation and stranded for some time in Las Vegas. There were no cars to rent, and trains and buses were instantly overbooked. It took them a long time to get back home. Many people in that situation hitchhiked. I figure if I have to do that in the wake of another terrorist attack, I want my journey of what may be thousands of miles to see me carrying a gun and enough ammo to get me through whatever may come. The fact is, I can carry more 9mm ammo than .45 ACP ammo. A similar argument was used for the 5.56mm rifle cartridge of the M-16 over the 7.62 mm ammo of the M-14 it replaced, and the same logic prevails here.

## **Learning With The SIG**

If you don’t read, you won’t be able to write well; if you never take the student’s role, you’ll eventually stultify in the teacher’s role. That’s why I try to take a major class related to what I teach at least once a year, more if I can. Being someone else’s student has taught me how to make the training experience more pleasant, meaningful, and rewarding for my own students.

While preparing this book, I signed on for what was nicknamed “The Big Dogs’ Course” at Chapman Academy in Columbia, Missouri. Founded by Ray Chapman, the famed world champion of IPSC, that legendary firearms training school is now run by Ray’s hand-picked successor, the extremely capable John Skaggs. I got to know John well when he and I both taught at Chapman Academy, and he’s one of the best in the business.



***When you run with the “Big Dogs,” you want fangs as sharp as theirs. Six of 16 in the class at Chapman Academy were state or regional handgun champions. Left to right: Rick Staples, Jim Williams, Trent Taylor, Mas Ayoob, Dennis Reichard, Gary Hartzel.***

We were warned that this class could go over 2,500 rounds of pistol alone, with shotgun, rifle, and perhaps some full-auto thrown in. Custom tailored as a combination of the famous Chapman Advanced course with some of the stuff the Academy reserves for SEALs and other heavy hitters who train there, this one-time course got its “Big Dogs” nickname from the fact that 14 of the 16 attendees were certified firearms instructors. Moreover, six were combat pistol champions at state or regional levels, and

there had been a national title or two among the collective accomplishments of the student body. Ray Chapman himself had come out of retirement to be present for three of the five days.

Not wanting to stay on the porch while the big dogs ran, I knew I'd need some top-notch hardware to keep up. The rifle and shotgun I used came from Al Greco's shop, Al's Custom (1701 Conway Wallrose Road, PO Box 205, Freedom, Penn. 15042). The rifle was a race-tuned DPMS AR-15 with minute-of-angle accuracy, and the shotgun an 870 so tricked out with recoil reduction modifications that it felt like shooting a 20-gauge. My pistols, by contrast, were ordinary, out-of-the-box SIG P226s. Out of habit, I brought two so I'd have a spare. It turned out I never needed the second one.



***SIGlite night sights in action. Camera's flash has caught ejected spent casing and the bullet splash at 9 o'clock on the Pepper Popper downrange as the author nails it in the dark from behind cover with his out-of-the-box SIG during a night "assault course" at Chapman Academy.***





*The Chapman Academy staff makes a point of teaching with different guns and not having one “trademark pistol.” From left, Ray Chapman himself is most likely to take a student’s gun to demonstrate. Rich Greiner uses a high-end 1911. John Skaggs prefers the Beretta 92. John Leveron carries a Glock Tactical/Practical, and Mark Spedale teaches with the same P220DAO he wears to work as a street cop.*



***Mild recoil of the 9mm SIG makes shooting thousands of rounds in five days no chore at all.***



***Chapman Academy emphasizes shooting below the line of sight at close range. Here, Brad Gehring engages the second of two targets with his P229 .40.***

Certainly, the 9mm ammo – Black Hills’ accurate remanufactured 115-grain JHP – was lighter than .45 ACP to lug around the many ranges on the complex. But with a promised 1,500 to 2,500 rounds of shooting on the menu, the light recoil of the 9mm made a lot of sense. When I was younger, all I brought to places like Chapman’s were .45s, and I could literally shoot them all day. Hell, back then I’d shoot a .44 Magnum until the ammo ran out. But that was then, and this was now. Arthritis had crept up on me, and I had discovered that a whole week of intensively shooting .45s could leave me with a wrist so sore it was almost crippling. If that made me a pussy, I could only say, “Meow.”

The week wore on. Only two of us, Brad Gehring and I, brought SIGs. Brad switched back and forth between a P229 .40 and a P220 .45. Since we are both geezers old enough to remember the “Fabulous Furry Freak

Brothers” of the underground comix of the 1960s, and since we both had facial hair, we became known as “the fabulous furry SIG brothers” for the week.



***The Chapman Academy advanced course includes a lot of one-handed shooting at 7 yards with either hand; they recommend this angled hold adapted by Ray Chapman from target shooting champ Bill McMillan...***



***...and the SIG has put all its bullets into the 4-inch center X ring, even in rapid fire. This Bianchi Cup target is standard (except for steel) at Chapman Academy.***



***Ray Chapman himself (left) enlightens Brad Gehring on the subtleties of the care and feeding of SIG-Sauer pistols.***



During that arduous week, the SIGs performed brilliantly. In exercises that demanded unsighted point shooting, their natural pointing qualities kept them on target. Shooting prone at 50 yards, the high accuracy of the SIG combined with the minimal bullet drop of the 115-grain 9mm made consistent center hits easy from the roll-over prone position that Chapman developed and made famous many years ago.

Moving targets? No sweat: the gun tracked them easily. Tight grouping drills? My P226 does an inch and a half at 25 yards, and its smooth trigger pull in both single- and double-action allows the shooter to deliver as much as he can earn from that promised accuracy.

The final qualification course was tougher than the Bianchi Cup course of fire. I make that statement having shot the Bianchi Cup 11 times. When it was over, the many target pistols, the one target-grade revolver in evidence, and the many super-expensive custom handguns had all been beaten by a SIG-Sauer. Brad and I both finished in the top five with our SIGs, the only two such guns in the class. I didn't keep track on Brad, but I had fired between 1,500 and 2,000 rounds through my P226 and hadn't cleaned it once during the week. It never jammed once.



***By the third day of the intensive shooting course at Chapman's, half a dozen students had bandaged hands...but were still lovin' the class. Note, however, that neither of the SIG shooters needed dressings.***



***Author appreciated the SIG's exquisite accuracy when shooting prone from 50 yards at Chapman Academy. Pistol is P226 9mm.***

Let me tell you something. That “first-in-class” certificate from Chapman Academy is framed and displayed along with a handful of other awards that really, *really* mean a lot to me. It was a hard-fought battle against “them big dogs.”

Night shooting? The factory-optional SIGlite night sights did fine. One-handed shooting proves easy with the SIG when the other hand is manipulating a flashlight. And easiest of all – mercy, it's almost cheating – was slipping an InSight M3 light onto the P226's light rail.



***Firing from The Barricades at 35 yards at Chapman Academy. Here, aSIG's accuracy and "shootability" manifests itself.***

Along about mid-week, we had noticed an epidemic of what John Skaggs calls "Chapman's Disease." The symptoms are hands abraded by sharp-edged guns fired day in and day out. One of the students was not only a state IDPA champion but an emergency room physician, and by Tuesday was either bandaging injuries or taping shooters' hands to prevent such injuries. Mine needed nothing: The SIG hadn't left a mark on 'em.

A few years earlier, I had gone to Clint Smith's Thunder Ranch and taken the Advanced Pistol Course with my older daughter. We had both shot 9mm Berettas. With a similar round expenditure of the fine Black Hills ammo (FMJ ball that time), we were also jam-free with those guns, but by the second day my thumb bore twin lacerations from the feed lips of the magazines we were constantly reloading. That did not happen with the SIG magazines.

I shot most of the Chapman course with 10-round “post-Ban” SIG mags. I don’t like to put wear on my pre-ban high-capacity magazines if there’s no need. Since the 10-rounders bespeak a stupid and disingenuous gesture toward crime control anyway, dropping these “Clinton magazines” in the dirt is pleasing rather than disturbing. I found the 10th round in these magazines a pain to put in. Fearful of making a magazine that could get them in trouble with the government, most manufacturers take pains to be certain an eleventh cartridge can’t be inserted. Once fully loaded, the cartridge stack has no flex left, and has to be really hammered into the butt of the SIG if it’s going to seat properly. For all those reasons, I just loaded them with nine rounds. When there was an “assault course,” I would break out the 15-rounders or my extended 20-round magazine.

Excellent performance. Non-fatiguing. Trouble-free. Sends the student to the head of his class. What more could a student at gun school ask of a pistol?



***The author fires P245 from prone on the indoor range at the SIGARMS Academy. A spent .45 casing arcs over his head, but the muzzle is still on target. Good training is visible and palpable wherever you encounter it, and SIGARMS Academy earned an excellent reputation.***



## Chapter 20



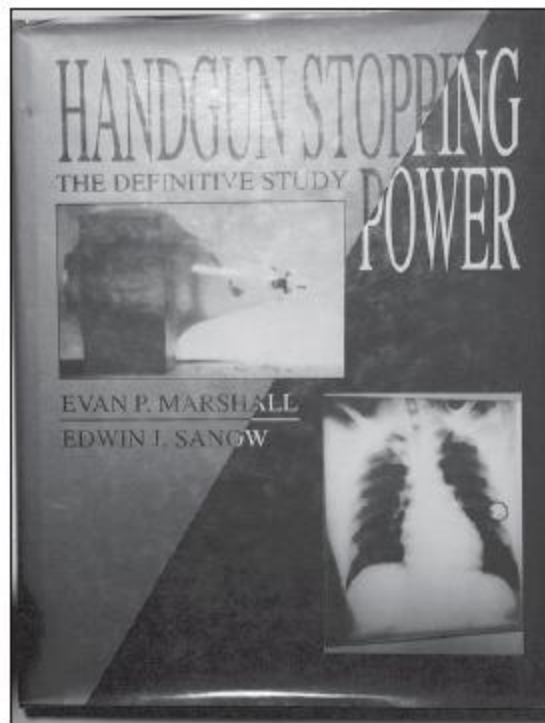
### *Ammunition for the SIG-Sauer*



**M**any pistols designed originally for military-specification ammunition would feed *only* milspec ammunition. Round-nose, full-metal-jacket bullets would taper themselves into the chambers, but the high-performance hollow-point rounds needed by police and armed citizens might fail to feed. Not so the SIG-Sauers, whose virtually straight-line feed angles and good internal

polishing have made them extraordinarily reliable with the best defense ammo.

Let's look at these service pistols caliber by caliber, watching for incompatibility and looking at the substantial collective history of these guns to determine what works best in them. Comments will be limited to conventional ammo. Exotic ammunition, usually with very light bullets at very high velocity, is notoriously unreliable in semiautomatic pistols because it does not operate at the same pressure curve for which the guns were designed. These loads also tend to be woefully inaccurate. Besides, with some of them costing \$3 per cartridge, the tab will be about \$600 to see if they work in your pistol or not. As a rule of thumb, *never carry a pistol with ammunition that hasn't been fired 200 rounds straight, in that gun and those magazines, without a single malfunction.* The defensive handgun is emergency life-saving rescue equipment, and reliability is a non-negotiable baseline requirement.



***The works of Evan Marshall and Ed Sanow are extremely useful resources for real world experience related to defensive ammo selection.***

## **.380 ACP**

The smallest caliber service pistol SIGARMS brings to the U.S., the .380 is at best marginal in power. Some of us would say submarginal. .380 ACP ( **A**utomatic **C**olt **P**istol) is known overseas variously as 9X17, 9mm Kurz, or 9mm Corto. The latter two words mean “short.” The little thing comes up short not only in length, but in power.

In this book’s chapter on the SIG .380s, three actual shootings are recounted. In those incidents a total of 10 shots were fired, and all struck the offenders. Scoring 100 percent hits in actual combat is nothing to sneeze at, and the shootability under stress of the P230 and P232 are the reason they are widely considered “the thinking man’s .380s.” However, you will notice that the only one-shot stop of the three was a brain shot. In the other two incidents, the offenders made a rather leisurely thing of stopping their hostilities after sustaining fatal wounds from .380 JHP rounds.

Evan Marshall’s studies show the Winchester 85-grain Silvertip, Federal 90-grain Hydra-Shok, and 88-grain Federal Classic hollow-points to work the best. I’ve also seen significant disruption of soft tissue with the El Dorado StarFire .380 JHP which, like the Hydra-Shok, was designed by my friend Tom Burszynski. All these rounds should be reasonably close to one another in terminal performance. Winchester with the SXT designed by Alan Corzine, and Remington with their Golden Saber designed by Dave Schluckebier, tried the combination of a slightly heavier bullet with a bonded-jacket high-tech hollow-point to get deeper penetration and better overall wound effect. Marshall’s colleague Ed Sanow, a very knowledgeable man who has completed much testing in ballistic gelatin, loads the Golden Saber in the .380 he carries for backup. In the slaughterhouse, I found even the 102-grain Golden Saber lacking in penetration, one reason I prefer not to carry a .380 at all. (Marshall, a gunfight survivor, at one time carried a SIG P230 for backup, but later went to a more potent caliber for his second gun, and neither he nor Sanow ever advocated carrying a .380 as a primary weapon.)



***The author knows a prominent gunshot wound authority who carries a SIG .380 loaded with ball ammo. The trick is putting the bullet in exactly the right place.***

One of the top medical examiners in this country carries a SIG P230. He and I were talking shop in the witness's waiting room waiting to testify for the defense in the case of a cop wrongfully charged with murder and got to talking about carry guns. He explained that having to wear a tailored suit for court all the time, he needed the flattest, smallest gun possible. His extensive gunshot autopsy experience had shown him that all .380 JHP rounds fell short of the penetration depth he felt was necessary, so he carried FMJ ammo and trusted his anatomic knowledge and not inconsiderable marksmanship skill to put the little SIG's .380 bullet in the right place if ever needed. (The accused officer, by the way, was found not guilty. He had stopped a deadly knife attack with two .40 S&W 180-grain Hydra-Shok bullets to the knife-wielder's chest, dropping the man instantly.)



***This broad array of 9mm ammo all works fine in author's late model P226; for personal needs, he picks the 115-grain +P Pro-Load Tactical or the 127-grain +P+ Winchester Ranger.***

I've found no particular round among the conventional .380 loads that causes problems in the SIGs. If you run across the rare P230 or P232 that jams, send it back to SIGARMS and they'll square the problem away for you.

## **9mm Parabellum**

Also known as 9X19, 9mm Luger, and 9mm NATO, this is the most popular SIG-Sauer caliber in the world. It was once the most popular in the U.S., but has been eclipsed by the .40 Smith & Wesson.



***P226 9mm gives remarkably consistent accuracy, and 100 percent reliability, with a wide range of ammunition.***



***Using a knife blade for perspective shows a sub-4-inch group at 25 yards with the Black Hills version of the 9mm Illinois State Police load, available to the public. Pistol is P228.***

The hottest loads (anything in the 1,300 feet per second velocity range) have been known to cycle the light slide of a P225 so fast that it did not pick up the next round on the cartridge stack. I would load the P225 only with standard-pressure loads. Prior to the 1996 beefed-up redesign, the P226 was known to suffer cracked frames with frequent shooting of these very hot rounds. It hasn't been a problem with the later models, nor with the P239 or the ***sig pro***.

Ball ammunition is impotent in stopping power and dangerously over-penetrative for defense use. You definitely want hollow-point rounds. Whether heavy slow bullets or light fast ones work best has been the subject of much debate.

The 115-grain JHPs at 1,300 or so feet per second proved to be the top "stoppers" in Evan Marshall's controversial study of actual gunfights. Illinois State Troopers shot many felons with that ammunition, and never had a case of one absorbing bullet after bullet and staying up and running, as has been common with many other 9mm rounds. It was used with much success in the optional 9mm pistols of the Border Patrol, and in the SIG P228s of the Secret Service and the Air Marshals. The latter two agencies were so impressed with 9mm +P+ performance that they opted for more of the same, trading up to SIG P229s in .357 SIG and loading with CCI Gold Dot and Winchester SXT 125-grain JHPs at 1,350 feet per second. ISP and the Border Patrol both later standardized on .40s.





***“4+1 syndrome” doesn’t necessarily happen with all SIGs nor with all loads as we see here. At 25 yards with Remington ammo, all five shots are in a very nice cluster, fired from a sig pro SP 2009. The group measures 1-3/4 inches.***

On the other end of the scale we find the 147-grain subsonic JHP. Once touted as the ultimate 9mm load, its potency in the field proved so spotty that most agencies that adopted it either went to lighter, faster 9mm ammo (Las Vegas, Jacksonville), or simply traded up to more powerful calibers. Some chose .45s (Chicago, LAPD, Los Angeles County). Some went to .40s (Michigan State Police, Indianapolis PD, New Orleans PD) or .357 SIGs (Richmond PD, and Virginia and Delaware State Police). It was FBI that popularized the 147-grain subsonic, and one of the ranking agents responsible later told me he was disappointed with how many times it took (in his words) “multiple, *multiple*” 147-grain bullets to stop an attacker. Today, San Diego is about the only PD still issuing on the 147-grain subsonic and insisting that it works fine.

A middle ground compromise in the eyes of some is the 124-grain +P at 1,250 feet per second. In the Gold Dot configuration from CCI Speer, this is

the standard load of NYPD for their SIG, S&W, and Glock service pistols, and they report excellent results. This round is available to the public in gun shops. Winchester's Ranger-T 127-grain +P+ has earned a splendid reputation in the SIG P226s of Orlando PD and other agencies. Unfortunately, this load is sold to police only, as are the "Illinois State Police Loads" (115-grain/1,300 fps) produced by Federal, Remington, and Winchester.

OEMs (original equipment manufacturers) load 115/1,300 fps 9mm JHP for public consumption, but their products are not always available at gunshops and in some cases have substandard quality control. Two brands I can strongly recommend, for both ample power and excellent QC in +P 115-grain 9mm rounds, are Black Hills EXP and Pro-Load Tactical.

Personally, I keep my SIG 9mms loaded with Ranger 127-grain +P+, or the 115-grain +P from Pro-Load or Black Hills. P225 owners and others more comfortable with standard-pressure rounds, can do no better than the Federal Classic 115-grain JHP, coded "9BP." It topped the standard-pressure 9mm list in the Marshall Study, and I've seen the same results. In one of my cases, an officer's single 9BP from a P226 struck the suspect in the chest and dropped him like a rock. In another, two such rounds in the thorax stopped a knife-wielder in his tracks. In both cases, every bullet was found lodged in the back at the end of a dynamic wound track, fully mushroomed.

## **.40 Smith & Wesson**

Introduced in 1990, conceptualized by experts Paul Liebenberg and Tom Campbell as a compromise between the firepower of a 16-shot 9mm and the power of an eight-shot .45, this cartridge was instantly embraced by the police and almost as quickly by the armed citizens. It is by far the largest selling police handgun caliber today. It has proven to be a better manstopper than any of us dared hope it would at the time of its introduction, thanks in large part to high-tech ammo and improved generations of loads.

First generation was the 180-grain subsonic JHP at 950 to 980 fps. It is the ballistic twin of the Old West's .38/40 Winchester round, albeit with a more efficient projectile. Standard JHPs seem prone to shooting through the



opponent; the higher-tech hollow-points seem more likely to stay in the body. Milwaukee PD reports splendid performance from their 180-grain Gold Dots; Evan Marshall ranked the Federal Hydra-Shok tops; and Dr. Martin Fackler touted the Winchester Ranger 180-grain. I would tend to go with the Ranger; almost every case I've seen of it striking a human body has resulted in a fully mushroomed projectile lodged in the opposite side of the torso.

Second generation was the 155- to 165-grain transonic, with the former at about 1,200 fps and the latter at around 1,150. This is very close to the performance of the 158-grain .357 Magnum bullet at 1,200 foot-seconds, but without that revolver load's tendency to almost always shoot through the human body. It has worked out very well in police shootings and seems to be a more dynamic combination than the first generation subsonic. I did one case where the officer shot the attacker five times in about a second with 155-grain Winchester Silvertips at 1,200 fps. The assailant instantly collapsed and dropped his weapon, dying moments later. All the bullets were recovered from the opposite side of the torso, widely mushroomed, at the end of impressive wound tracks. In another case, an ambusher shot a cop in the face with a .38, and the officer reflexively lit him up with a stream of 165-grain CCI Gold Dots at 1,150 fps. The assailant dropped his gun and fell, convulsing. Bullet performance of the Gold Dots was as advertised. This round passes all the FBI protocols for penetration through various barriers. Winchester's Ranger load in this 165-grain format has performed splendidly in multiple shootings in Nashville and elsewhere. Alaska State Troopers, who issue high-tech 180-grain subsonics to road troopers, chose the 155-grain Hydra-Shok for their SWAT team.



***The exquisite accuracy of Black Hills .40 S&W ammo is seen with this subcompact SIG P239, twice over from 25 yards.***

Third generation was the 135-grain supersonic bullet at 1,300 fps, very similar in performance to the .357 SIG and the .357 Magnum 125-grain rounds. Salt Lake City ballistics experimenter Richard Kelton developed it. In Louisiana, a man charged a cop with a knife and the officer fired one round of this from the hip out of his SIG P229. Only feet away, the man stopped as if he had hit an invisible wall, fell heavily onto his back, tried to roll over, sighed, and died. The bullet had struck him in the abdomen. The wound was truly massive in width. Medically, the attacker should not have died so quickly from an abdominal hit, but I've talked to the involved officer and seen the official reports.

The 135-grain supersonic, unfortunately, is limited to a very few OEMs. I am not impressed with Federal's much slower personal defense loading in this bullet weight. The bullet mushrooms, but it does very little corollary damage beyond the width of the bullet itself. At 1,300 fps, such bullets

shred tissue massively around the wound track. The only brand of 135-grain .40 I could recommend in good conscience, with unblemished quality control and full velocity, would be the Pro-Load Tactical.

Another variation of .40 S&W is the 165-grain subsonic developed for the FBI. It has mild recoil and is very accurate, delivering roughly the paper ballistics of a .38 Special or a little better, but hasn't earned much of a track record in actual shootings.

I'm not aware of any conventional .40 S&W round that causes any problem in the SIG-Sauers chambered for it.

For what it's worth, this writer normally carries the Black Hills EXP with 165-grain Gold Dot projectile at 1,140 fps. It expands well and fulfills all the FBI Protocol criteria for barricade penetration. It is also extraordinarily, even phenomenally, accurate. In my gun tests for magazines, it delivers the best groups about 70 percent of the time. I've won three consecutive state titles using this ammo. I had a SIG P229 .40 which averaged 3 to 4 inches at 25 yards with most ammunition; with Black Hills EXP it put five shots in 2 inches.

## **.45 ACP**

The first of the SIGs to really "make it" in this country, the P220 chambered for the .45 **A**utomatic **C**olt **P**istol cartridge is a perennial steady seller for SIGARMS, though their compact P245 hasn't taken off as much sales-wise as many of us expected. Having been the service pistol cartridge of the United States from 1911 through well into the 1980s – and still in service with a number of Special Forces units – the .45 caliber is a trusted American institution. Generations of soldiers came back from war speaking in awe of its potent effect, especially in contrast to that of the 9mm Luger, and it is rare to read an article on the .45 automatic which does not contain the phrase "legendary stopping power."

There is substance to the legend. There has been the occasional case of a human being who stood up to multiple .45 hits and stayed in the fight, but that occurrence is rare. In slaughterhouse testing of defensive handgun ammunition, we noticed that the .45 was the most consistent quick killer of large animals, more so even than the sometimes more spectacular .357

Magnum. A low-pressure cartridge, the .45 is not particularly difficult to control, and some people with small hands shoot the P220 .45 better than the lighter kicking P226 or P228 9mm simply because its slimmer grip-frame is a better fit for their hands.



***This all-steel P220 ST easily handles Winchester's police-only Ranger +P 230-grain .45 ACP at 950 fps.***



***Black Hills 230-grain JHP with Gold Dot bullet delivers excellent power and accuracy for Andy Kemp and his P220 American .45.***

The larger the caliber, the more forgiving the gun in terms of ammunition. The .45 is big enough in diameter that even with the least efficient bullet type, non-expanding full-metal-jacket with around nose, it earned that “legendary stopping power” reputation. With modern hollow-points, it works even better.

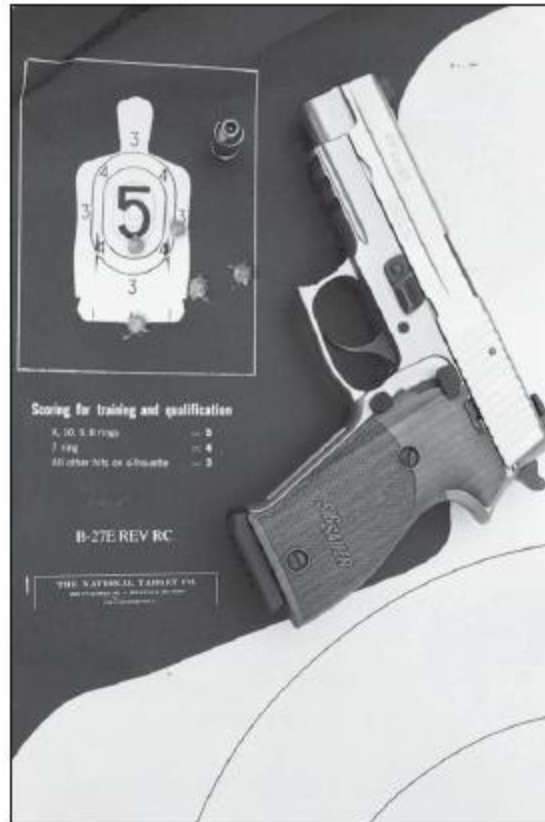
Standard-pressure 185-grain loads in the 900 to 1,000 fps range were once most popular in law enforcement, but have lately given way to the 230-grain. Of the 185s, Winchester’s Silvertip earned the reputation for virtually always expanding, and for staying within 8 to 10 inches of flesh. This makes it particularly suitable for home defense or situations where one can predict a “bystander-rich environment.” At +P velocity, a concept pioneered by Remington, the 185-grain bullet reaches 1,150 feet per second. Now it will do every bit as much damage as a 230-grain JHP, and will have a flatter trajectory for more effective long-range shooting, making it a good choice in a rural environment where long shots might be more

likely. The Remington 185-grain +P. JHP is available in standard and Golden Saber configurations, and Federal offers it in Hydra-Shok form.



***These loads all did fine in author's Langdon Custom P220 ST, with Federal 185-grain JHP proving the most accurate.***

The 200-grain bullet pioneered by Speer has such a short, wide configuration it was originally nicknamed “the flying ashtray” by gun expert Dean Grennell. It earned an excellent record in actual shootings, generally dropping the bad guys with one or two shots even if the bullets didn’t expand, which often happened when they were fired from short barrels. This cartridge configuration was very difficult to feed in 1911s. It would work fine in the loaded SIG P220 .45, but when reloaded into a P220 that had gone to slide-lock, the topmost round would sometimes catch on the feed ramp at six o’clock. This seems to have been pretty much cured in current generations of SIG P220 magazines and pistols. A department near me issues the 200-grain +P CCI Gold Dot for their agency-standard P220s and reports no feeding problems. Denver PD issues that round for all their .45s, including the many SIGs carried by their officers. The Gold Dot bullet expands more consistently and reliably, even at lower velocity, than its predecessor and in the +P loading offers 1,050 feet per second velocity. Pro-Load offers the same load with the same bullet in their Tactical series, and this ammunition delivers exquisite accuracy.



***For reasons he's never been able to quantify, the reliable and hard-hitting 230-grain Hydra-Shok has always given the author mediocre 25-yard accuracy like this in SIGs.***

A brief digression. Avoid low-velocity midrange Match 185-grain semi-wadcutter target ammo. Its bullet profile is difficult to feed, and its recoil impulse is too feeble to cycle aluminum-frame P220 and P245 pistols in which I've tried it. Strangely enough, it will work fine in my all-steel P220 ST. Apparently, the gun is moving less with lighter recoil because of greater weight, and the slide on the all-steel gun therefore is losing less momentum. I found that the brass would sort of dribble out of the ejection port and onto my feet. In any case, these competition loads are not relevant to defense guns like the SIG.





***Three particularly accurate loads in the author's stainless SIG .45: 185-grain Gold Dot, 230-grain Pro-Load ball, and 185-grain Winchester Match. Curiously, the latter works in his all-steel P220 but often not in aluminum guns.***



***The .45 user has a huge array of ammo options.***

The most popular duty ammo in .45 ACP today is in the 230-grain weight. A standard-pressure load will duplicate the recoil, muzzle blast, and trajectory of inexpensive generic 230-grain hardball. This allows relevant training, once it has been established that the gun will feed the JHP round, and is extremely cost effective.

The “high-tech” JHPs have earned a reputation for almost always expanding, unless they are plugged, even when fired from shorter barrels. Federal’s Hydra-Shok has been around the longest, and has been called the gold standard. I noticed in P220s that it wasn’t as accurate as it is in most other guns, and that most P220s would shoot other JHPs tighter. I never got to the bottom of that. It’s not a big deal, in any case. The P220s I’ve fired with Hydra would print it into 3 inches or so at 25 yards, 4 inches at worst, and that’s still acceptable police service accuracy by most standards. However, when the same gun would put Federal’s exquisitely accurate 185-grain JHP or 230 Match hardball into an inch or so, I had to wonder. Many departments have had great luck in the field with 230 Hydra-Shok in their P220s, however.



***This 230-grain hi-tech JHP has the same recoil and trajectory as generic .45 hardball, a training advantage. This is the author’s pet Quintrall Custom P220 European (note butt heel mag release), and BarSto barrel which groups Hydra-Shok as well as anything else. This gun can’t be used with latest generation SIG mags, because their extended floorplates won’t secure on the magazine release lever.***

Winchester’s 230-grain Ranger is the choice of LAPD and LASD for their optional .45s, and the civilian version of this load, known as the SXT, also works well. Remington’s Golden Saber 230-grain JHP does not seem

to expand quite as much, but the FBI is very happy with it and uses it exclusively in their SWAT team and Hostage Rescue Team handguns. El Dorado/ PMC StarFire 230-grain JHP expanded very dynamically in our slaughterhouse testing and caused massive wounds. CCI/Speer 230-grain Gold Dot expands very consistently in .45 ACP.

Shooters can also find +P 230-grain loads. Hornady's XTP in this configuration penetrates deeper than I'd like and doesn't mushroom as early in the wound track as some others. While it might be ideal for hunting javelina or deer within range using a P220, I'd hesitate to use it in a crowded environment. The best 230-grain +P I've seen is the Winchester Ranger, as issued to San Bernardino County Sheriff's Department. In one shooting, two deputies faced a gunman with a pistol in each hand. The first deputy shot him in the stomach with a blast of 12 gauge 00 tactical buckshot, and the suspect showed no response whatever. The second deputy shot him in the upper arm with a 230 Ranger +P from his privately owned, department-approved SIG P220, and the man instantly dropped his guns and fell. The perpetrator survived. The detective who interviewed him after surgery said the gunman told him, "Something (12 gauge shotgun) hit me in the stomach. Then something like to tore my arm off, and it hurt so bad I thought I'd better give up." His words were prophetic. The Ranger .45 bullet caused so much damage, surgeons had to amputate the arm at the shoulder.



***Awesome mushrooming of the CCI 200-grain JHP in actual flesh and bone. From Ayoob's textbook *The Semiautomatic Pistol in Police Service and Self Defense*.***



***Hi-tech .45 rounds recovered from animal shootings and depicted in one of the author's articles. The separated jacket of the Ranger is no big problem, since it doesn't separate until its job is done.***

SIGARMS recommends that +P be used sparingly, if at all, in aluminum-frame pistols. Personally, I keep my all-steel P220 ST loaded with either Pro-Load Tactical +P 200-grain, or Winchester Ranger 230-grain +P.

As noted, you rarely get complaints about bad guys going down too slowly when hit with .45s. But, it does happen. In Texas, the Department of Public Safety was delighted with their SIG P220s and had good results with a wide range of .45 ammo, from 185- to 230-grain. Some said, however, that the big, slow bullets didn't seem to have what one called "the lightning bolt effect" of the 125-grain .357 Magnum ammo they'd used when they carried revolvers.

SIGARMS was listening. The result was the next cartridge we'll discuss

## **.357 SIG**

The Texans weren't the only ones who missed their 125-grain .357 Magnum revolver ammo when law enforcement switched from sixguns to auto pistols. Running at 1,450 feet per second from 4- inch barrel, this round had delivered awesome stopping power in countless shootings involving departments from Indianapolis PD to the Kentucky State Police. Even with the substantial drop in velocity that occurred in the shorter barrel of an Indianapolis detective's 3-inch S&W Model 65 or a KSP detective's

S&W 2.5-inch Model 66, the effect seemed to be the same and the bad guys couldn't tell the difference.

SIGARMS in general, and then-SIGARMS executive Ted Rowe in particular, decided to do something about it. The result was the .357 SIG cartridge. Resembling a .40 S&W necked down to 9mm, although in detail it was much more than that, Federal Cartridge had developed a round that would give an honest 1,350 feet per second with a 125-grain bullet. It was 100 fps short of what was expected from a 4-inch service revolver, but as noted above, that didn't seem to matter much. Rowe and others went out and shot deer with it. The deer promptly fell down and died. The gun was tested for accuracy, and proved to be inherently more accurate than the .40 S&W in most pistols.

Introduced in 1994, first in the P229 and later in the P226, P239, and ***sig pro***, it was an instant hit. Delaware State Police kicked off a long list of major departments that adopted it. That list would soon include the Texas Department of Public Safety, which quickly developed a track record with it in actual shootings.

In one incident during the transition from .45 SIGs to the P226 in .357, two Texas state troopers engaged a gunman ensconced inside the cab of a tractor trailer. The senior officer's .45 fire from his P220 was accurate, but the short, wide bullets did not penetrate the cab. His rookie trainee fired his newly issue P226 into the same spot, and the 125-grain Gold Dot bullet went through the heavy steel and into the brain of the gunman, killing him instantly.



***An abundance of ammo is now available for the .357 SIG. 125-grain JHP is the proven choice.***

While .357 SIG ammunition has been produced by all the serious makers and has been made in 115- to 147-grain configurations, virtually all the actual shootings on record have involved the 125-grain JHP for which it was designed. Though Federal got there first, CCI's Gold Dot and Winchester's Ranger seem to have won most of the law enforcement agency ammo bids, and it's what the cops carry that gets documented in the field first as to "what actually works on the street."

The results, to make a long story short, virtually equal those of the great old 125-grain Magnum. They do so with *much* less muzzle flash and with dramatically less recoil. Bob Forker's excellent book *Ammo & Ballistics* lists the .357 SIG as generating 0.76 "relative recoil factor" with a 125-grain bullet at 1,350 fps, and the .357 Magnum revolver as generating a relative recoil factor of 0.89.<sup>(1)</sup> Subjectively, in the hand, the difference seems more than that. It feels to me as if the .357 SIG in an auto kicks about half as much as a .357 Magnum in a service revolver, and I say that having shot a *hell* of a lot with the latter during 30 years of wearing a badge and teaching the gun.





***Controllability is important in ammo selection. With proper stance and focus, Tara Miller has no problem with rapid fire of .40, .45, or .357 SIG.***

There is no particular downside to this cartridge in the SIG-Sauer pistol; after all, SIG designed it with Federal to be used in SIGs! The one problem I've seen with the cartridge is separation at the case neck. This seems to be specific to the ammunition manufacturers. I've seen it over the years mostly with Remington and Starline, very rarely with CCI or Winchester, and *never* with Federal. I've seen it happen with the .357 SIG round in other makes of pistol, not just SIG.

The ammo makers and the folks at SIGARMS all assure me that this is in the past, and I don't know of an instance where a case neck separation has occurred anywhere except in training. Nonetheless, it did put me off from the caliber for a while.

Accuracy is superb, power is undeniable, and recoil is controlled in trained hands. The .357 SIG is an excellent cartridge, and more and more police departments are adopting it. The round's design makes the gun chambered for it interchangeable with the .40 S&W by simply swapping barrels. This can be a good thing or a bad thing. I know armed citizens who



travel a lot who really appreciate this. They keep the .357 barrel in their SIG most of the time, but put the .40 barrel in the suitcase just in case they wind up someplace where they want to do a lot of shooting but can't find .357 SIG ammo. On the other hand, the cops in a town adjoining the city where I live issued their officers P229s in their choice of .40 S&W and .357 SIG. The cops split almost down the middle. After a couple of years, there were enough instances of .357 SIG ammo finding its way into the magazines of officers carrying .40s, or vice versa, that the agency simply put .357 SIG barrels into all the guns and standardized on that caliber.

Personal choice? With its superb history of stopping power and its excellent accuracy, I don't think there can be a contest. The CCI Gold Dot, at this time, *rules* the defensive ammo market in .357 SIG.

## The Rare Calibers

While they've been made experimentally or in very short production runs in a variety of calibers, the only unusual or "exotic" calibers in which you are likely to encounter in a SIG-Sauer pistol are .38 Super and .30 Luger.

The .38 Super in the P220 was the first accurate pistol in its caliber, because it was the first to headspace that semi-rimmed cartridge on the case mouth instead of the rim. Secret Service looked at .38 Super SIGs very seriously and ended up going with the .357 SIG instead, simply because it offered more velocity in a more accurate package that held more cartridges. (The .38 Super's length is such that it requires a larger frame; the .357 SIG, like the .40 S&W, was expressly engineered to fit a more compact 9mm-size platform.)

For decades, the .38 Super was the gun of choice when going legally armed in South America, where many countries forbade possession of military-caliber handguns by any but their own soldiers or police. Today, the .357 SIG and .40 S&W cartridges fill that need more effectively. The rarely-encountered .38 Super SIG is generally carried today by American shooting enthusiasts who (a) use a .38 Super "race gun" in competition, (b) therefore have buckets of practice ammo in that caliber, (c) recognize the practical and civil liability of using a double-action pistol for self-defense, and (d) want to practice with the cheap ammo already in hand.

The .38 Super will equal, or at best, only slightly exceed the ballistics and wound potential of the fastest 9mm +P+ ammo of the same bullet weight. Because so few of the guns are out there, researchers encounter few actual shootings with the .38 Super. Most of those occur near the Mexican border with 130-grain ball ammo, which is nearly identical to 9mm unless it hits heavy bone, in which case its greater power may have some increased effect. Winchester Silvertip appears to be the defensive load of choice in .38 Super and it should present no problems in a SIG P220 so chambered.

The .30 Luger (7.65 mm Parabellum) is generally considered obsolete and an anomaly. It was introduced in 1900. Resembling a miniature .357 SIG round with its bottleneck case, it was basically “necked up” to form the hugely popular 9mm Parabellum cartridge. It has a reputation for being particularly accurate, and in the Luger pistol was for decades the service handgun cartridge of Switzerland. This is why the classic SIG-Neuhausen P210 has been available in .30 Luger as well as 9mm Luger since its inception, and why SIG offers it in that caliber (and a conversion unit) to this day.

While I’ve heard of P220 and P226 pistols being made in this caliber, I’ve never actually seen one, let alone shot one. The time came when I was invited to teach in a South American country where carry permits were available even for qualified foreigners, but where no one but indigenous police and military could possess a handgun larger than .32 caliber. When scanning available guns, .30 Luger was the obvious choice. Finding the P210 ergonomically unsuitable and ridiculously expensive, unable to find a .30 Luger barrel for a SIG-Sauer (or for anything else), I bought a Browning High Power in that caliber. No JHP ammo has been made for .30 Luger since Fiocchi ran a few thousand rounds a long time ago, so I went with handloads, specifically the Hornady 90-grain XTP bullet at 1,400 feet per second. In South America, handloaded ammunition does not present the problems it creates in American courts.

## ***References***

1. (1) Forker, Bob, *Ammo & Ballistics*, Long Beach, CA: Safari Press, 2000, PP. 218 & 226.



### *About The Author*

**O**n the day in June 1998 when he was presented with the most coveted prize in his field, the Outstanding American Handgunner of the Year Award, Massad Ayoob was wearing a SIG-Sauer P226 pistol in a Ted Blocker LFI Concealment Rig under the jacket of his tailored suit. His experience with these pistols goes back to their first arrival on U.S. shores.

The handgun editor of *GUNS* magazine for more than a quarter century, and the law enforcement editor of *American Handgunner* for nearly as long, Ayoob is completing his 30th year as a sworn police officer and is well past 30 years as a published writer in the firearms field, with more than 3,000 articles in print. He is the author of numerous books including, *Fundamentals of Modern Police Impact Weapons*, *In the Gravest Extreme*, *StressFire Volumes One and Two*( with *Volume Three* to appear shortly), *The Truth About Self-Protection*, *Hit the White Part*, *The Semiautomatic Pistol in Police Service and Self-Defense*, *The Gun Digest Book of Combat Handgunnery, Fifth Edition* and numerous editions of the annual *Complete Book of Handguns* from Harris Publications. He currently serves also as associate editor for *Combat Handguns*, *Guns & Weapons for Law Enforcement*, and *Gun Week*. His work appears regularly in publications ranging from *Accurate Rifle* to *Backwoods Home*.

Chair of the firearms committee of the American Society for Law Enforcement Training since the organization's inception in 1987, and having served on that organization's ethics committee for a period of years, Ayoob has also taught for the International Association of Law Enforcement Firearms Instructors in state, national, and international seminar settings. Cross-trained in defensive tactics and less-lethal weaponry, he has earned instructorships in Advanced Taser, straight baton, telescoping baton, and his preferred impact weapon the PR-24 side-handle baton, in which he rose to International Instructor level. He reached the same level with the Lindell Method of handgun retention and disarming training.

In almost a quarter century as an expert witness for the courts, Ayoob has had a part in helping countless police officers and unarmed citizens escape

ruinous liability judgments, prison terms, and even the death penalty when he successfully explained to judges and juries why deadly force was justified under certain circumstances. He served for two years as co-vice chair of the forensic evidence committee of the National Association of Criminal Defense Lawyers, the first non-attorney to have done so.

As a firearms instructor, Ayoob developed the StressFire™ combat shooting system for handgun, shotgun, and rifle. StressFire™ was adopted into the United States Army's small arms doctrine in the late 1980s. Ayoob has also taught for the Joint Services Small Arms Project (JSSAP). In October of 1981, he founded the Lethal Force Institute, which soon earned recognition as one of the "Big Four" private shooting schools and has since been recognized as the leading school for teaching the judicious use of deadly force in self-defense. At this writing, he is still the Director of LFI.

A competitive shooter since the age of 19, Massad Ayoob has won several state championships, currently top shooter in his state (four years consecutive) in police combat, state champion IDPA shooter in Stock Service Revolver class (since 1998) and state champion IDPA Senior class (shooting a .45 caliber revolver against competitors with semiautomatic pistols). In 1999, he won the National Senior Champion title at the IDPA MidWinter National Championships, again shooting a revolver against autoloaders, and in 1998 he and his then-13-year-old daughter Justine won National Champion Parent/Child Team, Sub-Junior Class, at the National Junior Handgun Championships.

Ayoob has carried SIG-Sauer pistols in uniform in the course of his duties on two of the three police departments he has served over the last 30 years, including the one where he currently serves at the rank of Captain. A self-described "part-time cop and full time firearms instructor and researcher," he continues to use SIG-Sauer pistols regularly.

For information on Massad Ayoob's books, training videos, and LFI classes, contact LFI/Police Bookshelf, PO Box 122, Concord, NH 03302 USA, tel. 800-624-9049, website [www.Ayoob.com](http://www.Ayoob.com).



*Massad Ayoob with his two favorite SIG-Sauers, the P220 .45 and the P226 9mm.*

## ***Appendix***



### **SIG-SAUER P220 SERVICE AUTO PISTOL**

**Caliber:** 45 ACP, (7- or 8-shot magazine). **Barrel:** 4-3/8". **Weight:** 27.8 oz.  
**Length:** 7.8" overall. **Grips:** Checkered black plastic. **Sights:** Blade front, drift adjustable rear for windage. Optional Siglite nightsights.  
**Features:** Double action. Decocking lever permits lowering hammer onto locked firing pin. Squared combat-type trigger guard. Slide stays open after last shot. Imported from Germany by SIGARMS, Inc.

**Price:** Blue SA/DA or DAO **\$790.00**

**Price:** Blue, Siglite night sights **\$880.00**

**Price:** K-Kote or nickel slide **\$830.00**

**Price:** K-Kote or nickel slide with  
Siglite night sights **\$930.00**

### **SIG-Sauer P220 Sport Auto Pistol**

Similar to the P220 except has 4.9" barrel, ported compensator, all-stainless steel frame and slide, factory-tuned trigger, adjustable sights, extended competition controls. Overall length is 9.9", weighs 43.5 oz. Introduced 1999. From SIGARMS, Inc.

**Price:** **\$1,320.00**





### **SIG-Sauer P245 Compact Auto Pistol**

Similar to the P220 except has 3.9" barrel, shorter grip, 6-shot magazine, 7.28" overall length, and weighs 27.5 oz. Introduced 1999. From SIG-ARMS, Inc.

<b>Price:</b> Blue	<b>\$780.00</b>
<b>Price:</b> Blue, with Siglite sights	<b>\$850.00</b>
<b>Price:</b> Two-tone	<b>\$830.00</b>
<b>Price:</b> Two-tone with Siglite sights	<b>\$930.00</b>
<b>Price:</b> With K-Kote finish	<b>\$830.00</b>
<b>Price:</b> K-Kote with Siglite sights	<b>\$930.00</b>

### **SIG-Sauer P226 Service Pistol**



Similar to the P220 pistol except has 4.4" barrel, and weighs 28.3 oz. 357 SIG or 40 S&W. Imported from Germany by SIGARMS, Inc.

**Price:** Blue SA/DA or DAO **\$830.00**

**Price:** With Siglite night sights **\$930.00**

**Price:** Blue, SA/DA or DAO 357 SIG **\$875.00**

**Price:** With Siglite night sights **\$930.00**

**Price:** K-Kote finish, 40 S&W only or nickel slide **\$830.00**

**Price:** K-Kote or nickel slide Siglite night sights **\$930.00**

**Price:** Nickel slide 357 SIG **\$875.00**

**Price:** Nickel slide, Siglite night sights **\$930.00**



### **SIG-SAUER P232 PERSONAL SIZE PISTOL**

**Caliber:** 380 ACP, 7-shot. **Barrel:** 3-3/4". **Weight:** 16 oz.

**Length:** 6-1/2" overall. **Grips:** Checkered black composite. **Sights:** Blade front, rear adjustable for windage. **Features:** Double action/single action or DAO. Blowback operation, stationary barrel. Introduced 1997. Imported from Germany by SIGARMS, Inc.

**Price:** Blue SA/DA or DAO **\$505.00**

**Price:** In stainless steel **\$545.00**

**Price:** With stainless steel slide, blue frame **\$525.00**

**Price:** Stainless steel, Siglite night **\$585.00**

sights, Hogue grips

### **SIG-SAUER P229**

**Caliber:** 9mm Para, 357 SIG, 40 S&W. **Barrel:** 3.9". **Weight:** 28.1 oz.-29.5 oz. **Length:** 7.1 overall. **Grips:** N/A. **Sights:** Variety. **Features:** Mechanically locked, recoil-operated, semi-automatic, 4-point safety system, stainless steel slide, hard-anodized aluminum frame, available in two-tone and Nitron finish. Imported from Germany by SIGARMS, Inc.

**Price: \$1,320.00**



### **SIG PRO AUTO PISTOL**

**Caliber:** 9mm Para., 40 S&W, 10-shot magazine. **Barrel:** 3.86". **Weight:** 27.2 oz. **Length:** 7.36" overall. **Grips:** Composite and rubberized one-piece. **Sights:** Blade front, rear adjustable for windage. Optional Siglite night sights. **Features:** Polymer frame, stainless steel slide; integral frame accessory rail; replaceable steel frame rails; left-or right-handed magazine release. Introduced 1999. From SIGARMS, Inc.

**Price:** SP2340 (40 S&W) **\$596.00**

**Price:** SP2009 (9mm Para.) **\$596.00**

**Price:** As above with Siglite night sights **\$655.00**

**Price:** Two-tone finish, Siglite sights **\$765.00**



### **SIGARMS GSR Model 1911**

**Caliber:** 45 ACP. Built on the 1911 design but with an external extractor and an integral light rail on the dust cover. **Barrel:** 5". **Weight:** 39.2 oz. **Length:** 8.65". **Grips:** Checkered hardwood. **Sights:** Novak Lo-Mount rear, Wilson Combat Front. **Features:** This is SIGARMS' entry into the 1911 market. While all the pistols are fitted and assembled at the SIGARMS plant in New Hampshire, none of the components are actually made by SIGARMS. The firm has gone to the best parts makers in the business to acquire the components to create these pistols.

**Price**     **\$1,077.00**



### **SIG-SAUER P239 PISTOL**

**Caliber:** 9mm Para., 8-shot, 357 SIG 40 S&W, 7-shot magazine. **Barrel:** 3.6". **Weight:** 25.2 oz. **Length:** 6.6" overall. **Grips:** Checkered black

composite. **Sights:** Blade front, rear adjustable for windage. Optional Siglite night sights. **Features:** SA/DA or DAO; blackened stainless steel slide, aluminum alloy frame. Introduced 1996. Made in U.S.A. by SIGARMS, Inc.

**Price: SA/DA or DAO** **\$620.00**

**Price: SA/DA or DAO with Siglite**  
night sights **\$720.00**

**Price: Two-tone finish** **\$665.00**



### **HAMMERLI SP 20 TARGET PISTOL**

**Caliber:** 22 LR, 32 S&W. **Barrel:** 4.6". **Weight:** 34.6-41.8 oz. **Length:** 11.8" overall. **Grips:** Anatomically shaped synthetic Hi-Grip available in five sizes. **Sights:** Integral front in three widths, adjustable rear with changeable notch widths. **Features:** Extremely low-level sight line; anatomically shaped trigger; adjustable JPS buffer system for different recoil characteristics. Receiver available in red, blue, gold, violet or black. Introduced 1998. Imported from Switzerland by SIGARMS, Inc and Hammerli Pistols USA.

**Price: Hammerli 22 LR** **\$1,668.00**

**Price: Hammerli 32 S&W** **\$1,743.00**

### **HAMMERLI X-ESSE SPORT PISTOL**

An all-steel .22 LR target pistol with a Hi-Grip in a new anatomical shape and an adjustable hand rest. Made in Switzerland. Introduced 2003.

**Price: \$710.00**

## METALLIC SIGHTS



### AO Express

**AO EXPRESS SIGHTS** Low-profile, snag-free express-type sights. Shallow V rear with white vertical line, white dot front. All-steel, matte black finish. Rear is available in different heights. Made for most pistols, many with double setscrews. From AO Sight Systems, Inc.

Price: Standard Set, front and rear	<b>\$60.00</b>
Price: Big Dot Set, front and rear	<b>\$60.00</b>
Price: Tritium Set, Standard or Big Dot	<b>\$90.00</b>
Price: 24/7 Pro Express, Std. or Big Dot Tritium	<b>\$120.00</b>

**BO-MAR DELUXE BMCS** Gives 3/8" windage and elevation adjustment at 50 yards on Colt Gov't 45; sight radius under 7". For GM and Commander models only. Uses existing dovetail slot. Has shield-type rear blade.

Price:	<b>\$65.95</b>
Price: BMCS-2 (for GM and 9mm)	<b>\$68.95</b>
Price: Flat bottom	<b>\$65.95</b>
Price: BMGC (for Colt Gold Cup), angled serrated blade, rear	<b>\$68.95</b>
Price: BMGC front sight	<b>\$12.95</b>
Price: BMCZ-75 (for CZ-75,TZ-75, P-9 and most clones). Works with factory front	<b>\$68.95</b>

**BO-MAR FRONT SIGHTS** Dovetail style for S&W 4506, 4516, 1076; undercut style (.250", .280", 5/16" high); Fast Draw style (.210", .250", .230" high).

Price: **\$12.95**

**BO-MAR BMU XP-100/T/C CONTENDER** No gunsmithing required; has .080" notch.

Price: **\$77.00**

**BO-MAR BMML** For muzzleloaders; has .062" notch, flat bottom.

Price: **\$65.95**

Price: With 3/8" dovetail **\$65.95**

**BO-MAR RUGER "P" ADJUSTABLE SIGHT** Replaces factory front and rear sights.

Price: Rear sight **\$65.95**

Price: Front sight **\$12.00**

**BO-MAR BMR** Fully adjustable rear sight for Ruger MKI, MKII Bull barrel autos.

Price: Rear **\$65.95**

Price: Undercut front sight **\$12.00**

**BO-MAR GLOCK** Fully adjustable, all-steel replacement sights. Sight fits factory dovetail. Longer sight radius. Uses Novak Glock .275" high, .135" wide front, or similar.

Price: Rear sight **\$68.95**

Price: Front sight **\$20.95**

**BO-MAR LOW PROFILE RIB & ACCURACY TUNER** Streamlined rib with front and rear sights; 7 1/8" sight radius. Brings sight line closer to the bore than standard or extended sight and ramp. Weight 5 oz. Made for Colt Gov't 45, Super 38, and Gold Cup 45 and 38.

Price: **\$140.00**

**BO-MAR COMBAT RIB** For S&W Model 19 revolver with 4" barrel. Sight radius 5 3/4", weight 5 1/2 oz.



Price: **\$127.00**

**BO-MAR WINGED RIB** For S&W 4" and 6" length barrels—K-38, M10, HB 14 and 19. Weight for the 6" model is about 7 1/4 oz.

Price: **\$140.00**

**BO-MAR COVER-UP RIB** Adjustable rear sight, winged front guards. Fits right over revolver's original front sight. For S&W 4" M-10HB, M-13, M-58, M-64 & 65, Ruger 4" models SDA-34, SDA-84, SS-34, SS-84, GF-34, GF-84.

Price: **\$130.00**

**CHIP MCCORMICK "DROP-IN"** A low mount sight that fits any 1911-style slide with a standard military-type dovetail sight cut (60x.290"). Dovetail front sights also available. From Chip McCormick Corp.

Price: **\$47.95**

**CHIP MCCORMICK FIXED SIGHTS** Same sight picture (.110" rear - .110" front) that's become the standard for pro combat shooters. Low mount design with rounded edges. For 1911-style pistols. May require slide machining for installation. From Chip McCormick Corp.

Price: **\$24.95**

**C-MORE SIGHTS** Replacement front sight blades offered in two types and five styles. Made of Du Pont Acetal, they come in a set of five high-contrast colors: blue, green, pink, red and yellow. Easy to install. Partridge style for Colt Python (all barrels), Ruger Super Blackhawk (7 1/2"), Ruger Blackhawk (4 5/8"); ramp style for Python (all barrels), Blackhawk (4 5/8"), Super Blackhawk (7 1/2" and 10 1/2"). From C-More Systems.

Price: **\$19.95**

**G.G. & G. GHOST RINGS** Replaces the factory rear sight without gunsmithing. Black phosphate finish. Available for Colt M1911 and Commander, Beretta M92F, Glock, S&W, SIG Sauer.

Price: **\$65.00**

**Heinie Slant Pro**



**HEINIE SLANT PRO** Made with a slight forward slant, the unique design of these rear sights is snag free for unimpeded draw from concealment. The combination of the slant and the rear serrations virtually eliminates glare. Made for most popular handguns. From Heinie Specialty Products.

Price: **\$50.35 to \$122.80**

**HEINIE STRAIGHT EIGHT SIGHTS** Consists of one tritium dot in the front sight and a slightly smaller Tritium dot in the rear sight. When aligned correctly, an elongated 'eight' is created. The Tritium dots are green in color. Designed with the belief that the human eye can correct vertical alignment faster than horizontal. Available for most popular handguns. From Heinie Specialty Products.

Price: **\$104.95 to \$122.80**

**HEINIE CROSS DOVETAIL FRONT SIGHTS** Made in a variety of heights, the standard dovetail is 60 degrees x .305" x .062" with a .002 taper. From Heinie Specialty Products.

Price: **\$20.95 to \$47.20**

**JP GHOST RING** Replacement bead front, ghost ring rear for Glock and M1911 pistols. From JP Enterprises.

Price: **\$79.95**

Price: Bo-Mar replacement leaf with  
JP dovetail front bead **\$99.95**

**LES BAER CUSTOM ADJUSTABLE LOW MOUNT REAR SIGHT** Considered one of the top adjustable sights in the world for target shooting with 1911-style pistols. Available with Tritium inserts. From Les Baer Custom.

Price: **\$49.00 (standard); \$99.00 (tritium)**

**LES BAER DELUXE FIXED COMBAT SIGHT** A tactical-style sight with a very low profile. Incorporates a no-snag design and has serrations

on sides. For 1911-style pistols. Available with Tritium inserts for night shooting. From Les Baer Custom.

Price: **\$26.00** (standard); **\$67.00** (with Tritium)

**LES BAER DOVETAIL FRONT SIGHT** Blank dovetail sight machined from bar stock. Can be contoured to many different configurations to meet user's needs. Available with Tritium insert. From Les Baer Custom.

Price: **\$17.00** (standard); **\$47.00** (with Tritium insert)

**LES BAER FIBER OPTIC FRONT SIGHT** Dovetail .330x65 degrees, .125" wide post, .185" high, .060" diameter. Red and green fiber optic. From Les Baer Custom.

Price: **\$24.00**

**LES BAER PPC-STYLE ADJUSTABLE REAR SIGHT** Made for use with custom built 1911-style pistols, allows the user to preset three elevation adjustments for PPC-style shooting. Milling required for installation. Made from 4140 steel. From Les Baer Custom.

Price: **\$120.00**

**LES BAER DOVETAIL FRONT SIGHT WITH TRITIUM INSERT** This fully contoured and finished front sight comes ready for gunsmith installation. From Les Baer Custom.

Price: **\$47.00**

**MMC TACTICAL ADJUSTABLE SIGHTS** Low-profile, snag free design. Twenty-two click positions for elevation, drift adjustable for windage. Machined from 4140 steel and heat treated to 40 RC. Tritium and non-tritium. Ten different configurations and colors. Three different finishes. For 1911s, all Glock, HK USP, S&W, Browning Hi-Power.

Price: Sight set, tritium **\$144.92**

Price: Sight set, white outline or white dot **\$99.90**

Price: Sight set, black **\$93.90**

**MEPROLIGHT TRITIUM NIGHT SIGHTS** Replacement sight assemblies for use in low-light conditions. Available for rifles, shotguns, handguns and bows. TRU-DOT models carry a 12-year warranty on the useable illumination, while non-TRU-DOT have a 5-year warranty. Contact Hesco, Inc. for complete list of available models.

Price: Kahr K9, K40, fixed, TRU-DOT **\$100.00**

Price: Ruger P85, P89, P94, adjustable, TRU-DOT **\$156.00**

Price: Ruger Mini-14R sights **\$140.00**

Price: SIG Sauer P220, P225, P226, P228, adjustable, TRU-DOT **\$156.00**

Price: Smith& Wesson autos, fixed or adjustable, TRU-DOT **\$100.00**

Price: Taurus PT92, PT100, adjustable, TRU-DOT **\$156.00**

Price: Walther P-99, fixed, TRU-DOT **\$100.00**

Price: Shotgun bead **\$32.00**

Price: Beretta M92, Cougar, Brigadier, fixed, TRU-DOT **\$100.00**

Price: Browning Hi-Power, adjustable, TRU-DOT **\$156.00**

Price: Colt M1911 Govt., adjustable, TRU-DOT **\$156.00**

**MILLETT SERIES 100 REAR SIGHTS** All-steel highly visible, click adjustable. Blades in white outline, target black, silhouette, 3-dot. Fit most popular revolvers and autos.

Price: **\$51.77 to \$84.00**

**MILLETT BAR-DOT-BAR TRITIUM NIGHT SIGHTS** Replacement front and rear combos fit most automatics. Horizontal tritium bars on rear, dot front sight.

Price: **\$152.25**

**MILLETT BAR/DOT** Made with orange or white bar or dot for increased visibility. Available for Beretta 84, 85, 92S, 92SB, Browning, Colt Python & Trooper, Ruger GP 100, P85, Redhawk, Security Six.

Price: **\$14.99 to \$24.99**

**MILLETT 3-DOT SYSTEM SIGHTS** The 3-Dot System sights use a single white dot on the front blade and two dots flanking the rear notch. Fronts available in Dual-Crimp and Wide Stake-On styles, as well as special applications. Adjustable rear sight available for most popular auto pistols and revolvers including Browning Hi-Power, Colt 1911 Government and Ruger P85.

Price: Front, from **\$16.80**

Price: Adjustable rear **\$55.60**

**MILLETT REVOLVER FRONT SIGHTS** All-steel replacement front sights with either white or orange bar. Easy to install. For Ruger GP-100, Redhawk, Security-Six, Police-Six, Speed-Six, Colt Trooper, Diamondback, King Cobra, Peacemaker, Python, Dan Wesson 22 and 15-2.

Price: **\$13.60 to \$16.00**

**MILLETT DUAL-CRIMP FRONT SIGHT** Replacement front sight for automatic pistols. Dual-Crimp uses an all-steel two-point hollow rivet system. Available in eight heights and four styles. Has a skirted base that covers the front sight pad. Easily installed with the Millett Installation Tool Set. Available in Blaze Orange Bar, White Bar, Serrated Ramp, Plain Post. Available in heights of .185", .200", .225", .275", .312", .340" and .410".

Price: **\$16.80**

**MILLETT STAKE-ON FRONT SIGHT** Replacement front sight for automatic pistols. Stake-On sights have skirted base that covers the front sight pad. Easily installed with the Millett Installation Tool Set. Available in seven heights and four styles—Blaze Orange Bar, White Bar, Serrated Ramp, Plain Post. Available for Glock 17L and 24, others.

Price: **\$16.80**

**MILLETT ADJUSTABLE TARGET** Positive light-deflection serration and slant to eliminate glare and sharp edge sight notch. Audible “click” adjustments. For AMT Hardballer, Beretta 84, 85, 92S, 92SB, Browning Hi-Power, Colt 1911 Government and Gold Cup, Colt revolvers, Dan Wesson 15, 41, 44, Ruger revolvers, Glock 17, 17L, 19, 20, 21, 22, 23.

Price: **\$44.99**

**MILLETT ADJUSTABLE WHITE OUTLINE** Similar to the Target sight, except has a white outline on the blade to increase visibility. Available for the same handguns as the Target model, plus BRNO CZ-75/TZ-75/TA-90 without pin on front sight, and Ruger P85.

Price: **\$44.99 to \$49.99**

**OMEGA OUTLINE SIGHT BLADES** Replacement rear sight blades for Colt and Ruger single action guns and the Interarms Virginian Dragoon. Standard Outline available in gold or white notch outline on blue metal. From Omega Sales, Inc.

Price: **\$10.00**

**OMEGA MAVERICK SIGHT BLADES** Replacement “peep-sight” blades for Colt, Ruger SAs, Virginian Dragoon. Three models available—No. 1, Plain; No. 2, Single Bar; No. 3, Double Bar Rangefinder. From Omega Sales, Inc.

Price: Each **\$10.00**

**ONE RAGGED HOLE** Replacement rear sight ghost ring sight for Ruger handguns. Fits Blackhawks, Redhawks, Super Blackhawks, GP series and Mk. II target pistols with adjustable sights. From One Ragged Hole, Tallahassee, Florida.

Price: **NA**

**PACHMAYR ACCU-SET** Low-profile, fully adjustable rear sight to be used with existing front sight. Available with target, white outline or 3-dot blade. Blue finish. Uses factory dovetail and locking screw. For Browning, Colt, Glock, SIG Sauer, S&W and Ruger autos. From Pachmayr.

Price: **\$59.98**

**P-T TRITIUM NIGHT SIGHTS** Self-luminous tritium sights for most popular handguns, Colt AR-15, H&K rifles and shotguns. Replacement handgun sight sets available in 3- Dot style (green/green, green/yellow, green/ orange) with bold outlines around inserts; Bar-Dot available in green/green with or without white outline rear sight. Functional life exceeds 15 years. From Innovative Weaponry, Inc.

Price: Handgun sight sets **\$99.95**

Price: Rifle sight sets **\$99.95**

Price: Rifle, front only **\$49.95**

Price: Shotgun, front only **\$49.95**

**T/C ENCORE FIBER OPTIC SIGHT SETS** Click adjustable, steel rear sight and ramp-style front sight, both fitted with Tru-Glo™ fiber optics. Specifically-designed for the T/C Encore pistol series. From Thompson/Center arms.

Price **\$49.35**

**T/C ENCORE TARGET REAR SIGHT** Precision, steel construction with click adjustments (via knurled knobs) for windage and elevation. Models available with low, medium and high blades. From Thompson/Center Arms.

Price: **\$54.00**

**TRIJICON NIGHT SIGHTS** Three-dot night sight system uses tritium lamps in the front and rear sights. Tritium “lamps” are mounted in silicone rubber inside a metal cylinder. A polished crystal sapphire provides protection and clarity. Inlaid white outlines provide 3-dot aiming in daylight also. Available for most popular handguns including Glock 17, 19, 20, 21, 23, 24, 25, 26, 29, 30, H&K USP, Ruger P94, SIG P220, P225, 226, Colt 1911. Front and rear sets available. From Trijicon, Inc.

Price: **\$80.00 to \$299.00**

**TRIJICON 3-DOT** Self-luminous front iron night sight for the Ruger SP101.



Price: **\$39.99**

**WICHITA SERIES 70/80 SIGHT** Provides click windage and elevation adjustments with precise repeatability of settings. Sight blade is grooved and angled back at the top to reduce glare. Available in Low Mount Combat or Low Mount Target styles for Colt 45s and their copies, S&W 645, Hi-Power, CZ 75 and others.

Price: Rear sight, target or combat **\$75.00**

Price: Front sight, Patridge or ramp **\$18.00**

**WICHITA GRAND MASTER DELUXE RIBS** Ventilated rib has wings machined into it for better sight acquisition and is relieved for Mag-Na-Porting. Milled to accept Weaver see-thru-style rings. Made of stainless; front and rear sights blued. Has Wichita Multi-Range rear sight system, adjustable front sight. Made for revolvers with 6" barrel.

Price: Model 301S, 301B (adj. sight  
K frames with custom bbl. of 1" to  
1.032" dia. L and N frame with  
1.062" to 1.100" dia. bbl.) **\$225.00**

Price: Model 303S, 303B (adj. sight  
K, L, N frames with factory  
barrel) **\$225.00**

**WICHITA MULTI-RANGE QUICK CHANGE SIGHTING SYSTEM**

Multi-range rear sight can be pre-set to four positive repeatable range settings. Adjustable front sight allows compensation for changing lighting and weather conditions with just one front sight adjustment. Front sight comes with Lyman 17A Globe and set of apertures.

Price: Rear sight **\$125.00**

Price: Front, sight **\$95.00**

**WILLIAMS FIRE SIGHT SETS** Red fiber optic metallic sight replaces the original. Rear sight has two green fiber optic elements. Made of CNC-machined aluminum. Fits all Glocks, Ruger P-Series (except P-85), S&W 910, Colt Gov't. Model Series 80, Ruger GP 100 and Redhawk, and SIG Sauer (front only).

Price: Front and rear set **\$39.95**

Price: SIG Sauer front **\$19.95**

**WILSON ADJUSTABLE REAR SIGHTS** Machined from steel, the click adjustment design requires simple cuts and no dovetails for installation. Available in several configurations: matte black standard blade with .128" notch; with .110" notch; with Tritium dots and .128" square or "U" shaped notch; and Combat Pyramid. From Wilson Combat.

Price: **\$24.95 to \$69.95**

**WILSON NITE-EYES SIGHTS** Low-profile, snag free design with green and yellow Tritium inserts. For 1911-style pistols. From Wilson Combat.

Price: **\$119.95**

**WILSON TACTICAL COMBAT SIGHTS** Low-profile and snag-free in design, the sight employs the Combat Pyramid shape. For many 1911-style pistols and some Glock models. From Wilson Combat.

Price: **\$139.95**

## PERIODICAL PUBLICATIONS

### **AAFTA News (M)**

5911 Cherokee Ave., Tampa, FL 33604. Official newsletter of the American Airgun Field Target Assn.

### **Action Pursuit Games Magazine (M)**

CFW Enterprises, Inc., 4201 W. Vanowen Pl., Burbank, CA 91505 818-845-2656. \$4.99 single copy U.S., \$5.50 Canada. Editor: Dan Reeves. World's leading magazine of paintball sports.

### **Air Gunner Magazine**

4 The Courtyard, Denmark St., Wokingham, Berkshire RG11 2AZ, England/011-44-734-771677. \$U.S. \$44 for 1 yr. Leading monthly airgun magazine in U.K.

### **Airgun Ads**

Box 33, Hamilton, MT 59840/406-363-3805; Fax: 406-363-4117. \$35 1 yr. (for first mailing; \$20 for second mailing; \$35 for Canada and foreign orders.) Monthly tabloid with extensive For Sale and Wanted airgun listings.

### **The Airgun Letter**

Gapp, Inc., 4614 Woodland Rd., Ellicott City, MD 21042-6329/410-730-5496; Fax: 410-730-9544; e-mail: [staff@airgnltr.net](mailto:staff@airgnltr.net); <http://www.airgunletter.com>. \$21 U.S., \$24 Canada, \$27 Mexico and \$33 other foreign orders, 1 yr. Monthly newsletter for airgun users and collectors.

### **Airgun World**

4 The Courtyard, Denmark St., Wokingham, Berkshire RG40 2AZ, England/011-44-734-771677. Call for subscription rates. Oldest monthly airgun magazine in the U.K., now a sister publication to Air Gunner.

### **Alaska Magazine**

Morris Communications, 735 Broad Street, Augusta, GA 30901/706-722-6060. Hunting, Fishing and Life on the Last Frontier articles of Alaska and western Canada.

### **American Firearms Industry**

Nat'l. Assn. of Federally Licensed Firearms Dealers, 2455 E. Sunrise

Blvd., Suite 916, Ft. Lauderdale, FL 33304. \$35.00 yr. For firearms retailers, distributors and manufacturers.

### **American Guardian**

NRA, 11250 Waples Mill Rd., Fairfax, VA 22030. Publications division. \$15.00 1 yr. Magazine features personal protection; home-self-defense; family recreation shooting; women's issues; etc.

### **American Gunsmith**

Belvoir Publications, Inc., 75 Holly Hill Lane, Greenwich, CT 06836-2626/203-661-6111. \$49.00 (12 issues). Technical journal of firearms repair and maintenance.

### **American Handgunner\***

Publisher's Development Corp., 591 Camino de la Reina, Suite 200, San Diego, CA 92108/800-537-3006 \$16.95 yr. Articles for handgun enthusiasts, competitors, police and hunters.

### **American Hunter (M)**

National Rifle Assn., 11250 Waples Mill Rd., Fairfax, VA 22030 (Same address for both.) Publications Div. \$35.00 yr. Wide scope of hunting articles.

### **American Rifleman (M)**

National Rifle Assn., 11250 Waples Mill Rd., Fairfax, VA 22030 (Same address for both). Publications Div. \$35.00 yr. Firearms articles of all kinds.

### **American Survival Guide**

McMullen Angus Publishing, Inc., 774 S. Placentia Ave., Placentia, CA 92670-6846. 12 issues \$19.95/714-572-2255; FAX: 714-572-1864.

### **Armes & Tir\***

c/o FABECO, 38, rue de Trévis 75009 Paris, France. Articles for hunters, collectors, and shooters. French text.

### **Arms Collecting (Q)**

Museum Restoration Service, P.O. Box 70, Alexandria Bay, NY 13607-0070. \$22.00 yr.; \$62.00 3 yrs.; \$112.00 5 yrs.

### **Australian Shooter (formerly Australian Shooters Journal)**

Sporting Shooters' Assn. of Australia, Inc., P.O. Box 2066, Kent Town SA 5071, Australia. \$60.00 yr. locally; \$65.00 yr. overseas surface mail. Hunting and shooting articles.

**The Backwoodsman Magazine**

P.O. Box 627, Westcliffe, CO 81252. \$16.00 for 6 issues per yr.; \$30.00 for 2 yrs.; sample copy \$2.75. Subjects include muzzle-loading, woodstore, primitive survival, trapping, homesteading, blackpowder cartridge guns, 19th century how-to.

**Black Powder Cartridge News (Q)**

SPG, Inc., P.O. Box 761, Livingston, MT 59047/Phone/ Fax: 406-222-8416. \$17 yr. (4 issues) (\$6 extra 1st class mailing). For the blackpowder cartridge enthusiast.

**Blackpowder Hunting (M)**

Intl. Blackpowder Hunting Assn., P.O. Box 1180Z, Glenrock, WY 82637/307-436-9817. \$20.00 1 yr., \$36.00 2 yrs. How-to and where-to features by experts on hunting; shooting; ballistics; traditional and modern blackpowder rifles, shotguns, pistols and cartridges.

**Black Powder Times**

P.O. Box 234, Lake Stevens, WA 98258. \$20.00 yr.; add \$5 per year for Canada, \$10 per year other foreign. Tabloid newspaper for blackpowder activities; test reports.

**Blade Magazine**

Krause Publications, 700 East State St., Iola, WI 54990-0001. \$25.98 for 12 issues. Foreign price (including Canada-Mexico) \$50.00. A magazine for all enthusiasts of handmade, factory and antique knives.

**Caliber**

GFI-Verlag, Theodor-Heuss Ring 62, 50668 K"ln, Germany. For hunters, target shooters and reloaders.

**The Caller (Q) (M)**

National Wild Turkey Federation, P.O. Box 530, Edgefield, SC 29824. Tabloid newspaper for members; 4 issues per yr. (membership fee \$25.00)

**Cartridge Journal (M)**

Robert Mellichamp, 907 Shirkmere, Houston, TX 77008/ 713-869-0558. Dues \$12 for U.S. and Canadian members (includes the newsletter); 6 issues.

**The Cast Bullet\*(M)**

Official journal of The Cast Bullet Assn. Director of Membership, 203 E.

2nd St., Muscatine, IA 52761. Annual membership dues \$14, includes 6 issues.

**COLTELLI, che Passione (Q)**

Casella postale N.519, 20101 Milano, Italy/Fax:02-48402857. \$15 1 yr., \$27 2 yrs. Covers all types of knives—collecting, combat, historical. Italian text.

**Combat Handguns\***

Harris Publications, Inc., 1115 Broadway, New York, NY 10010.

**Deer & Deer Hunting Magazine**

Krause Publications, 700 E. State St., Iola, WI 54990-0001. \$19.95 yr. (9 issues). For the serious deer hunter. Website: [www.krause.com](http://www.krause.com)

**The Derringer Peanut (M)** The National Association of Derringer Collectors, P.O. Box 20572, San Jose, CA 95160. A newsletter dedicated to developing the best derringer information. Write for details.

**Deutsches Waffen Journal**

Journal-Verlag Schwend GmbH, Postfach 100340, D-74503 Schwäbisch Hall, Germany/0791-404-500; FAX:0791-404-505 and 404-424. DM102 p. yr. (interior); DM125.30 (abroad), postage included. Antique and modern arms and equipment. German text.

**Double Gun Journal**

P.O. Box 550, East Jordan, MI 49727/800-447-1658. \$35 for 4 issues.

**Ducks Unlimited, Inc. (M)**

1 Waterfowl Way, Memphis, TN 38120

**The Engraver (M) (Q)**

P.O. Box 4365, Estes Park, CO 80517/970-586-2388; Fax: 970-586-0394. Mike Dubber, editor. The journal of firearms engraving.

**The Field**

King's Reach Tower, Stamford St., London SE1 9LS England. £36.40 U.K. 1 yr.; 49.90 (overseas, surface mail) yr.; £82.00 (overseas, air mail) yr. Hunting and shooting articles, and all country sports.

**Field & Stream**

Time4 Media, Two Park Ave., New York, NY 10016/212-779-5000. Monthly shooting column. Articles on hunting and fishing.

**Field Tests**

Belvoir Publications, Inc., 75 Holly Hill Lane; P.O. Box 2626, Greenwich, CT 06836-2626/203-661-6111; 800-829-3361 (subscription

line). U.S. & Canada \$29 1 yr., \$58 2 yrs.; all other countries \$45 1 yr., \$90 2 yrs. (air).

### **Fur-Fish-Game**

A.R. Harding Pub. Co., 2878 E. Main St., Columbus, OH 43209. \$15.95 yr. Practical guidance regarding trapping, fishing and hunting.

### **The Gottlieb-Tartaro Report**

Second Amendment Foundation, James Madison Bldg., 12500 NE 10th Pl., Bellevue, WA 98005/206-454- 7012; Fax:206-451-3959. \$30 for 12 issues. An insiders guide for gun owners.

### **Gray's Sporting Journal**

Gray's Sporting Journal, P.O. Box 1207, Augusta, GA 30903. \$36.95 per yr. for 6 issues. Hunting and fishing journals. Expeditions and Guides Book (Annual Travel Guide).

### **Gun List†**

700 E. State St., Iola, WI 54990. \$36.98 yr. (26 issues); \$65.98 2 yrs. (52 issues). Indexed market publication for firearms collectors and active shooters; guns, supplies and services. Website: [www.krause.com](http://www.krause.com)

**Gun News Digest (Q)** Second Amendment Fdn., P.O. Box 488, Station C, Buffalo, NY 14209/716-885-6408; Fax:716-884-4471. \$10 U.S.; \$20 foreign.

### **The Gun Report**

World Wide Gun Report, Inc., Box 38, Aledo, IL 61231-0038. \$33.00 yr. For the antique and collectable gun dealer and collector.

### **Gunmaker (M) (Q)**

ACGG, P.O. Box 812, Burlington, IA 52601-0812. The journal of custom gunmaking.

### **The Gunrunner**

Div. of Kexco Publ. Co. Ltd., Box 565G, Lethbridge, Alb., Canada T1J 3Z4. \$23.00 yr., sample \$2.00. Monthly newspaper, listing everything from antiques to artillery.

### **Gun Show Calendar (Q)**

700 E. State St., Iola, WI 54990. \$14.95 yr. (4 issues). Gun shows listed; chronologically and by state. Website: [www.krause.com](http://www.krause.com)

### **Gun Tests**

11 Commerce Blvd., Palm Coast, FL 32142. The consumer resource for the serious shooter. Write for information.

**Gun Trade News**

Bruce Publishing Ltd., P.O. Box 82, Wantage, Oxon OX12 7A8, England/44-1-235-771770; Fax: 44-1-235-771848. Britain's only "trade only" magazine exclusive to the gun trade.

**Gun Week†**

Second Amendment Foundation, P.O. Box 488, Station C, Buffalo, NY 14209. \$35.00 yr. U.S. and possessions; \$45.00 yr. other countries. Tabloid paper on guns, hunting, shooting and collecting (36 issues).

**Gun World**

Y-Visionary Publishing, LP 265 South Anita Drive, Ste. 120, Orange, CA 92868. \$21.97 yr.; \$34.97 2 yrs. For the hunting, reloading and shooting enthusiast.

**Guns & Ammo**

Primedia, 6420 Wilshire Blvd., Los Angeles, CA 90048/ 213-782-2780. \$23.94 yr. Guns, shooting, and technical articles.

**Guns**

Publishers Development Corporation, P.O. Box 85201, San Diego, CA 92138/800-537-3006. \$19.95 yr. In-depth articles on a wide range of guns, shooting equipment and related accessories for gun collectors, hunters and shooters.

**Guns Review**

Ravenhill Publishing Co. Ltd., Box 35, Standard House, Bonhill St., London EC 2A 4DA, England. £20.00 sterling (approx. U.S. \$38 USA & Canada) yr. For collectors and shooters.

**H.A.C.S. Newsletter (M)**

Harry Moon, Pres., P.O. Box 50117, South Slope RPO, Burnaby BC, V5J 5G3, Canada/604-438-0950; Fax:604- 277- 3646. \$25 p. yr. U.S. and Canada. Official newsletter of The Historical Arms Collectors of B.C. (Canada).

**Handgunner\***

Richard A.J. Munday, Seychelles house, Brightlingsen, Essex CO7 ONN, England/012063-305201. £18.00 (sterling).

**Handguns**

Primedia, 6420 Wilshire Blvd., Los Angeles, CA 90048/ 323-782-2868. \$23/94 yr. For the handgunning and shooting enthusiast.



**Handloader\***

Wolfe Publishing Co., 2626 Stearman Road, Ste. A, Prescott, AZ 86301/520-445-7810; Fax: 520-778-5124. \$22.00 yr. The journal of ammunition reloading.

**INSIGHTS\***

NRA, 11250 Waples Mill Rd., Fairfax, VA 22030. Editor, John E. Robbins. \$15.00 yr., which includes NRA junior membership; \$10.00 for adult subscriptions (12 issues). Plenty of details for the young hunter and target shooter; emphasizes gun safety, marksmanship training, hunting skills.

**International Arms & Militaria Collector (Q)**

Arms & Militaria Press, P.O. Box 80, Labrador, Qld. 4215, Australia. A\$39.50 yr. (U.S. & Canada), 2 yrs. A\$77.50; A\$37.50 (others), 1 yr., 2 yrs. \$73.50 all air express mail; surface mail is less. Editor: Ian D. Skennerton.

**International Shooting Sport\*/UIT Journal**

International Shooting Union (UIT), Bavariaring 21, D-80336 Munich, Germany. Europe: (Deutsche Mark) DM44.00 yr., 2 yrs. DM83.00; outside Europe: DM50.00 yr., 2 yrs. DM95.00 (air mail postage included.) For international sport shooting.

**Internationales Waffen-Magazin**

Habegger-Verlag Zürich, Postfach 9230, CH-8036 Zürich, Switzerland. SF 105.00 (approx. U.S. \$73.00) surface mail for 10 issues. Modern and antique arms, self-defense. German text; English summary of contents.

**The Journal of the Arms & Armour Society (M)**

A. Dove, P.O. Box 10232, London, SW19 2ZD England. £15.00 surface mail; £20.00 airmail sterling only yr. Articles for the historian and collector.

**Journal of the Historical Breechloading Smallarms Assn.**

Published annually. P.O. Box 12778, London, SE1 6XB, England. \$21.00 yr. Articles for the collector plus mailings of short articles on specific arms, reprints, newsletters, etc.

**Knife World**

Knife World Publications, P.O. Box 3395, Knoxville, TN 37927. \$15.00 yr.; \$25.00 2 yrs. Published monthly for knife enthusiasts and collectors.

Articles on custom and factory knives; other knife-related interests, monthly column on knife identification, military knives.

**Man At Arms\***

P.O. Box 460, Lincoln, RI 02865. \$27.00 yr., \$52.00 2 yrs. plus \$8.00 for foreign subscribers. The N.R.A. magazine of arms collecting-investing, with excellent articles for the collector of antique arms and militaria.

**The Mannlicher Collector (Q)(M)**

Mannlicher Collectors Assn., Inc., P.O. Box 7144, Salem Oregon 97303. \$20/ yr. subscription included in membership.

---

\*Published bi-monthly

†Published weekly

‡Published three times per month.

All others are published monthly.

M=Membership requirements; write for details.

Q=Published Quarterly.

---

**MAN/MAGNUM**

S.A. Man (Pty) Ltd., P.O. Box 35204, Northway, Durban 4065, Republic of South Africa. SA Rand 200.00 for 12 issues. Africa's only publication on hunting, shooting, firearms, bushcraft, knives, etc.

**The Marlin Collector (M)**

R.W. Paterson, 407 Lincoln Bldg., 44 Main St., Champaign, IL 61820.

**Muzzle Blasts (M)**

National Muzzle Loading Rifle Assn., P.O. Box 67, Friendship, IN 47021/812-667-5131. \$35.00 yr. annual membership. For the blackpowder shooter.

**Muzzleloader Magazine\***

Scurlock Publishing Co., Inc., Dept. Gun, Route 5, Box 347-M, Texarkana, TX 75501. \$18.00 U.S.; \$22.50 U.S./yr. for foreign subscribers. The publication for blackpowder shooters.

**National Defense (M)\***

American Defense Preparedness Assn., Two Colonial Place, Suite 400, 2101 Wilson Blvd., Arlington, VA 22201-3061/703-522-1820; FAX: 703-522-1885. \$35.00 yr. Articles on both military and civil defense field, including weapons, materials technology, management.

**National Knife Magazine (M)**

Natl. Knife Coll. Assn., 7201 Shallowford Rd., P.O. Box 21070, Chattanooga, TN 37424-0070. Membership \$35 yr.; \$65.00 International yr.

**National Rifle Assn. Journal (British) (Q)**

Natl. Rifle Assn. (BR.), Bisley Camp, Brookwood, Woking, Surrey, England. GU24, OPB. £24.00 Sterling including postage.

**National Wildlife\***

Natl. Wildlife Fed., 1400 16th St. NW, Washington, DC 20036, \$16.00 yr. (6 issues); International Wildlife, 6 issues, \$16.00 yr. Both, \$22.00 yr., includes all membership benefits. Write attn.: Membership Services Dept., for more information.

**New Zealand GUNS\***

Waitekauri Publishing, P.O. 45, Waikino 3060, New Zealand. \$NZ90.00 (6 issues) yr. Covers the hunting and firearms scene in New Zealand.

**New Zealand Wildlife (Q)**

New Zealand Deerstalkers Assoc., Inc., P.O. Box 6514, Wellington, N.Z.  
\$30.00 (N.Z.). Hunting, shooting and firearms/game research articles.

**North American Hunter\* (M)**

P.O. Box 3401, Minnetonka, MN 55343/612-936-9333; email:  
huntingclub@pclink.com. \$18.00 yr. (7 issues). Articles on all types of  
North American hunting.

**Outdoor Life**

Time4 Media, Two Park Ave., New York, NY 10016. \$16.95/yr.  
Extensive coverage of hunting and shooting. Shooting column by Jim  
Carmichel.

**La Passion des Courteaux (Q)**

Phenix Editions, 25 rue Mademoiselle, 75015 Paris, France. French text.

**Paintball Games International Magazine**

Aceville Publications, Castle House, 97 High St., Colchester, Essex,  
England CO1 1TH/011-44-206-564840. Write for subscription rates.  
Leading magazine in the U.K. covering competitive paintball activities.

**Paintball News**

PBN Publishing, P.O. Box 1608, 24 Henniker St., Hillsboro, NH  
03244/603-464-6080. \$35 U.S. 1 yr. Bi-weekly. Newspaper covering the  
sport of paintball, new product reviews and industry features.

**Paintball Sports (Q)**

Paintball Publications, Inc., 540 Main St., Mount Kisco, NY 10549/941-  
241-7400. \$24.75 U.S. 1 yr., \$32.75 foreign. Covering the competitive  
paintball scene.

**Performance Shooter**

Belvoir Publications, Inc., 75 Holly Hill Lane, Greenwich, CT 06836-  
2626/203-661-6111. \$45.00 yr. (12 issues). Techniques and technology  
for improved rifle and pistol accuracy.

**Petersen's HUNTING Magazine**

Primedia, 6420 Wilshire Blvd., Los Angeles, CA 90048. \$19.94 yr.;  
Canada \$29.34 yr.; foreign countries \$29.94 yr. Hunting articles for all  
game; test reports.

**P.I. Magazine**

America's Private Investigation Journal, 755 Bronx Dr., Toledo, OH  
43609. Chuck Klein, firearms editor with column about handguns.

**Pirsch**

BLV Verlagsgesellschaft mbH, Postfach 400320, 80703 Munich, Germany/089-12704-0; Fax: 089-12705-354. German text.

**Point Blank**

Citizens Committee for the Right to Keep and Bear Arms (sent to contributors), Liberty Park, 12500 NE 10th Pl., Bellevue, WA 98005

**POINTBLANK (M)** Natl. Firearms Assn., Box 4384 Stn. C, Calgary, AB T2T 5N2, Canada. Official publication of the NFA.

**The Police Marksman\***

6000 E. Shirley Lane, Montgomery, AL 36117. \$17.95 yr. For law enforcement personnel.

**Police Times (M)**

3801 Biscayne Blvd., Miami, FL 33137/305-573-0070.

**Popular Mechanics**

Hearst Corp., 224 W. 57th St., New York, NY 10019. Firearms, camping, outdoor oriented articles.

**Precision Shooting**

Precision Shooting, Inc., 222 McKee St., Manchester, CT 06040. \$37.00 yr. U.S. Journal of the International Benchrest Shooters, and target shooting in general. Also considerable coverage of varmint shooting, as well as big bore, small bore, schuetzen, lead bullet, wildcats and precision reloading.

**Rifle\***

Wolfe Publishing Co., 2626 Stearman Road, Ste. A, Prescott, AZ 86301/520-445-7810; Fax: 520-778-5124. \$19.00 yr. The sporting firearms journal.

**Rifle's Hunting Annual**

Wolfe Publishing Co., 2626 Stearman Road, Ste. A, Prescott, AZ 86301/520-445-7810; Fax: 520-778-5124. \$4.99 Annual. Dedicated to the finest pursuit of the hunt.

**Rod & Rifle Magazine**

Lithographic Serv. Ltd., P.O. Box 38-138, Wellington, New Zealand. \$50.00 yr. (6 issues). Hunting, shooting and fishing articles.

**Safari\* (M)**

Safari Magazine, 4800 W. Gates Pass Rd., Tucson, AZ 85745/602-620-1220. \$55.00 (6 times). The journal of big game hunting, published by

Safari Club International. Also publish Safari Times, a monthly newspaper, included in price of \$55.00 national membership.

### **Second Amendment Reporter**

Second Amendment Foundation, James Madison Bldg., 12500 NE 10th Pl., Bellevue, WA 98005. \$15.00 yr. (non-contributors).

### **Shoot! Magazine\***

Shoot! Magazine Corp., 1770 West State Stret PMB 340, Boise ID 83702/208-368-9920; Fax: 208-338-8428. Website: [www.shootmagazine.com](http://www.shootmagazine.com) \$32.95 (6 times/yr.). Articles of interest to the cowboy action shooter, or others interested the Western-era firearms and ammunition.

### **Shooter's News**

23146 Lorain Rd., Box 349, North Olmsted, OH 44070/ 216-979-5258; Fax: 216-979-5259. \$29 U.S. 1 yr., \$54 2 yrs.; \$52 foreign surface. A journal dedicated to precision riflery.

### **Shooting Industry**

Publisher's Dev. Corp., 591 Camino de la Reina, Suite 200, San Diego, CA 92108. \$50.00 yr. To the trade. \$25.00.

### **Shooting Sports USA**

National Rifle Assn. of America, 11250 Waples Mill Road, Fairfax, VA 22030. Annual subscriptions for NRA members are \$5 for classified shooters and \$10 for non-classified shooters. Non-NRA member subscriptions are \$15. Covering events, techniques and personalities in competitive shooting.

### **Shooting Sportsman\***

P.O. Box 11282, Des Moines, IA 50340/800-666-4955 (for subscriptions). Editorial: P.O. Box 1357, Camden, ME 04843. \$19.95 for six issues. The magazine of wingshooting and fine guns.

### **The Shooting Times & Country Magazine (England)†**

IPC Magazines Ltd., King's Reach Tower, Stamford St, 1 London SE1 9LS, England/0171-261-6180; Fax: 0171-261- 7179. £65 (approx. \$98.00) yr.; £79 yr. overseas (52 issues). Game shooting, wild fowling, hunting, game fishing and firearms articles. Britain's best selling field sports magazine.

### **Shooting Times**

Primedia, 2 News Plaza, P.O. Box 1790, Peoria, IL 61656/ 309-682-

6626. \$16.97 yr. Guns, shooting, reloading; articles on every gun activity.

**The Shotgun News**

Primedia, 2 News Plaza, P.O. Box 1790, Peoria, IL 61656/ 800-495-8362. \$28.95 yr.; foreign subscription call for rates. Sample copy \$4.00. Gun ads of all kinds.

**SHOT Business**

National Shooting Sports Foundation, Flintlock Ridge Office Center, 11 Mile Hill Rd., Newtown, CT 06470-2359/ 203-426-1320; FAX: 203-426-1087. For the shooting, hunting and outdoor trade retailer.

**Shotgun Sports**

P.O. Box 6810, Auburn, CA 95604/916-889-2220; FAX:916-889-9106. \$31.00 yr. Trapshooting how-to's, shotshell reloading, shotgun patterning, shotgun tests and evaluations, Sporting Clays action, waterfowl/upland hunting. Call 1-800-676-8920 for a free sample copy.

**The Single Shot Exchange Magazine**

PO Box 1055, York SC 29745/803-628-5326 phone/fax. \$31.50/yr., monthly. Articles of interest to the blackpowder cartridge shooter and antique arms collector.

**Single Shot Rifle Journal** (M)

Editor John Campbell, PO Box 595, Bloomfield Hills, MI 48303/248-458-8415. Email: [jcampbell@chemistri.com](mailto:jcampbell@chemistri.com) Annual dues \$35 for 6 issues. Journal of the American Single Shot Rifle Assn.

**The Sixgunner** (M)

Handgun Hunters International, P.O. Box 357, MAG, Bloomingdale, OH 43910

**The Skeet Shooting Review**

National Skeet Shooting Assn., 5931 Rofit Rd., San Antonio, TX 78253. \$20.00 yr. (Assn. membership includes mag.) Competition results, personality profiles of top Skeet shooters, how-to articles, technical, reloading information.

**Soldier of Fortune**

Subscription Dept., P.O. Box 348, Mt. Morris, IL 61054. \$29.95 yr.; \$39.95 Canada; \$50.95 foreign.

**Sporting Clays Magazine**

Patch Communications, 5211 South Washington Ave.,

Titusville, FL 32780/407-268-5010; FAX: 407-267-7216. \$29.95 yr. (12 issues). Official publication of the National Sporting Clays Association.

### **Sporting Goods Business**

Miller Freeman, Inc., One Penn Plaza, 10th Fl., New York, NY 10119-0004. Trade journal.

### **Sporting Goods Dealer**

Two Park Ave., New York, NY 10016. \$100.00 yr. Sporting goods trade journal.

### **Sporting Gun**

Bretton Court, Bretton, Peterborough PE3 8DZ, England. £27.00 (approx. U.S. \$36.00), airmail £35.50 yr. For the game and clay enthusiasts.

### **The Squirrel Hunter**

P.O. Box 368, Chireno, TX 75937. \$14.00 yr. Articles about squirrel hunting.

### **Stott's Creek Calendar**

Stott's Creek Printers, 2526 S 475 W, Morgantown, IN 46160/317-878-5489. 1 yr (3 issues) \$11.50; 2 yrs. (6 issues) \$20.00. Lists all gun shows everywhere in convenient calendar form; call for information.

### **Super Outdoors**

2695 Aiken Road, Shelbyville, KY 40065/502-722-9463; 800-404-6064; Fax: 502-722-8093. Mark Edwards, publisher. Contact for details.

### **TACARMI**

Via E. De Amicis, 25; 20123 Milano, Italy. \$100.00 yr. approx. Antique and modern guns. (Italian text.)

### **Territorial Dispatch—1800s Historical Publication (M)**

National Assn. of Buckskinners, 4701 Marion St., Suite 324, Livestock Exchange Bldg., Denver, CO 80216. Michael A. Nester & Barbara Wyckoff, editors. 303-297-9671.

### **Trap & Field**

1000 Waterway Blvd., Indianapolis, IN 46202. \$25.00 yr. Official publ. Amateur Trapshooting Assn. Scores, averages, trapshooting articles.

### **Turkey Call\* (M)**

Natl. Wild Turkey Federation, Inc., P.O. Box 530, Edgefield, SC 29824. \$25.00 with membership (6 issues per yr.)



**Turkey & Turkey Hunting\***

Krause Publications, 700 E. State St., Iola, WI 54990-0001. \$13.95 (6 issue p. yr.). Magazine with leading-edge articles on all aspects of wild turkey behavior, biology and the successful ways to hunt better with that info. Learn the proper techniques to calling, the right equipment, and more.

**The Accurate Rifle**

Precisions Shooting, Inc., 222 Mckee Street, Manchester CT 06040. \$37 yr. Dedicated to the rifle accuracy enthusiast.

**The U.S. Handgunner\* (M)**

U.S. Revolver Assn., 40 Larchmont Ave., Taunton, MA 02780. \$10.00 yr. General handgun and competition articles. Bi-monthly sent to members.

**U.S. Airgun Magazine**

P.O. Box 2021, Benton, AR 72018/800-247-4867; Fax: 501-316-8549. 10 issues a yr. Cover the sport from hunting, 10-meter, field target and collecting. Write for details.

**The Varmint Hunter Magazine (Q)**

The Varmint Hunters Assn., Box 759, Pierre, SD 57501/ 800-528-4868. \$24.00 yr.

**Waffenmarkt-Intern**

GFI-Verlag, Theodor-Heuss Ring 62, 50668 K"ln, Germany. Only for gunsmiths, licensed firearms dealers and their suppliers in Germany, Austria and Switzerland.

**Wild Sheep (M) (Q)**

Foundation for North American Wild Sheep, 720 Allen Ave., Cody, WY 82414. Website: <http://iigi.com/os/non/fnaws/fnaws.htm>; e-mail: [fnaws@wyoming.com](mailto:fnaws@wyoming.com). Official journal of the foundation.

**Wisconsin Outdoor Journal**

Krause Publications, 700 E. State St., Iola, WI 54990-0001. \$17.97 yr. (8 issues). For Wisconsin's avid hunters and fishermen, with features from all over that state with regional reports, legislative updates, etc. Website: [www.krause.com](http://www.krause.com)

**Women & Guns**

P.O. Box 488, Sta. C, Buffalo, NY 14209. \$24.00 yr. U.S.; \$72.00 foreign (12 issues). Only magazine edited by and for women gun owners.

## **World War II\***

Cowles History Group, 741 Miller Dr. SE, Suite D-2, Leesburg, VA 20175-8920. Annual subscriptions \$19.95 U.S.; \$25.95 Canada; 43.95 foreign. The title says it— WWII; good articles, ads, etc.

---

\*Published bi-monthly

† Published weekly

‡Published three times per month.

All others are published monthly.

M=Membership requirements; write for details.

Q=Published Quarterly.

---

## ARMS LIBRARY

### General

**Action Shooting: Cowboy Style**, by John Taffin, Krause Publications, Iola, WI, 1999. 320 pp., illustrated. \$39.95

Details on the guns and ammunition. Explanations of the rules used for many events. The essential cowboy wardrobe.

**Advanced Muzzleloader's Guide**, by Toby Bridges, Stoeger Publishing Co., So. Hackensack, NJ, 1985. 256 pp., illus. Paper covers. \$14.95

The complete guide to muzzle-loading rifles, pistols and shotguns—flintlock and percussion.

**Aids to Musketry for Officers & NCOs**, by Capt. B.J. Friend, Excalibur Publications, Latham, NY, 1996. 40 pp., illus. Paper covers. \$7.95

A facsimile edition of a pre-WWI British manual filled with useful information for training the common soldier.

**Air Gun Digest, 3rd Edition**, by J.I. Galan, DBI Books, a division of Krause Publications, Iola, WI, 1995. 258 pp., illus. Paper covers. \$19.95

Everything from A to Z on air gun history, trends and technology.

**American Air Rifles**, by House, James E. Krause Publications, Iola, WI. 2002. 1st edition. 208 pages, with 198 b&w photos. Softcover. \$22.95

Air rifle ballistics, sights, pellets, games, and hunting caliber recommendations are thoroughly explained to help shooters get the most out of their American air rifles. Evaluation of more than a dozen American-made and American-imported air rifle models.

**American B.B. Gun: A Collector's Guide, The**, by Dunathan, Arni T. A.S. Barnes And Co., Inc., South Brunswick. 2001. 154 pages, illustrated with nearly 200 photographs, drawings and detailed diagrams. Hardcover. \$35.00

**American and Imported Arms, Ammunition and Shooting Accessories, Catalog No. 18 of the Shooter's Bible**, Stoeger, Inc., reprinted by Fayette Arsenal, Fayetteville, NC, 1988. 142 pp., illus. Paper covers. \$10.95

A facsimile reprint of the 1932 Stoeger's Shooter's Bible.

**America's Great Gunmakers**, by Wayne van Zwoell, Stoeger Publishing Co., So. Hackensack, NJ, 1992. 288 pp., illus. Paper covers. \$16.95

This book traces in great detail the evolution of guns and ammunition in America and the men who formed the companies that produced them.

**Armed and Female**, by Paxton Quigley, E.P. Dutton, New York, NY, 1989. 237 pp., illus. \$16.95

The first complete book on one of the hottest subjects in the media today, the arming of the American woman.

**Arming the Glorious Cause: Weapons of the Second War for Independence**, by James B. Whisker, Daniel D. Hartzler and Larry W. Yantz, R & R Books, Livonia, NY, 1998. 175 pp., illustrated. \$45.00.

A photographic study of Confederate weapons.

**Arms and Armour in Antiquity and the Middle Ages**, by Charles Boutell, Stackpole Books, Mechanicsburg, PA, 1996. 352 pp., illus. \$22.95

Detailed descriptions of arms and armor, the development of tactics and the outcome of specific battles.

**Arms & Armor in the Art Institute of Chicago**, by Walter J. Karcheski, Jr., Bulfinch Press, Boston, MA, 1995. 128 pp., illus. \$35.00

Now, for the first time, the Art Institute of Chicago's arms and armor collection is presented in the visual delight of 103 color illustrations.

**Arms for the Nation: Springfield Longarms**, edited by David C. Clark, Scott A. Duff, Export, PA, 1994. 73 pp., illus. Paper covers. \$9.95

A brief history of the Springfield Armory and the arms made there.

**Arsenal of Freedom, The Springfield Armory, 1890-1948: A Year-by-Year Account Drawn from Official Records**, compiled and edited by Lt. Col. William S. Brophy, USAR Ret., Andrew Mowbray, Inc., Lincoln, RI, 1991. 400 pp., illus. Soft covers. \$29.95

A "must buy" for all students of American military weapons, equipment and accoutrements.

**Assault Pistols, Rifles and Submachine Guns**, by Duncan Long, Paladin Press, Boulder, CO, 1997, 8 1/2 x 11, soft cover, photos, illus. 152 pp. \$21.95

This book offers up-to-date, practical information on how to operate and field-strip modern military, police and civilian combat weapons. Covers new developments and trends such as the use of fiber optics, liquid-recoil systems and lessening of barrel length are covered. Troubleshooting procedures, ballistic tables and a list of manufacturers and distributors are also included.

**Assault Weapons, 5th Edition, The Gun Digest Book of,** edited by Jack Lewis and David E. Steele, DBI Books, a division of Krause Publications, Iola, WI, 2000. 256 pp., illustrated. Paper covers. \$21.95

This is the latest word on true assault weaponry in use today by international military and law enforcement organizations.

**Benchrest Shooting Primer, The,** by Brennan, Dave (Editor). Precision Shooting, Inc., Manchester, CT 2000. 2nd edition. 420 pages, illustrated with black and white photographs, drawings and detailed diagrams. Pictorial softcover. \$24.95

The very best articles on shooting and reloading for the most challenging of all the rifle accuracy disciplines...benchrest shooting.

**Black Powder, Pig Lead and Steel Silhouettes,** by Matthews, Paul A. Wolfe Publishing, Prescott, AZ, 2002. 132 pages, illustrated with black and white photographs and detailed drawings and diagrams. Softcover. \$16.95

**Book of the Crossbow The,** by Sir Ralph Payne-Gallwey, Dover Publications, Mineola, NY, 1996. 416 pp., illus. Paper covers. \$14.95

Unabridged republication of the scarce 1907 London edition of the book on one of the most devastating hand weapons of the Middle Ages.

**British Small Arms of World War 2,** by Ian D. Skennerton, I.D.S.A. Books, Piqua, OH, 1988. 110 pp., 37 illus. \$25.00

**Carbine And Shotgun Speed Shooting: How To Hit Hard And Fast In Combat,** by Moses, Steve. Paladin Press, Boulder, CO. 2002. 96 pages, illus. Softcover \$18.00

In this groundbreaking book, he breaks down the mechanics of speed shooting these weapons, from stance and grip to sighting, trigger control and more, presenting them in a concise and easily understood manner. Whether you wish to further your defensive, competitive or recreational shooting skills, you will find this book a welcome resource for learning to shoot carbines and shotguns with the speed and accuracy that are so critical at short distances.

**Combat Handgunnery, 5th Edition, The Gun Digest Book of,** by Chuck Taylor, DBI Books, a division of Krause Publications, Iola, WI, 2002. 256 pp., illus. Paper covers. \$21.95

This edition looks at real world combat handgunnery from three different perspectives—military, police and civilian.

**Complete Blackpowder Handbook, 4th Edition, The**, by Sam Fadala, DBI Books, a division of Krause Publications, Iola, WI, 2002. 400 pp., illus. Paper covers. \$21.95

Expanded and completely rewritten edition of the definitive book on the subject of blackpowder.

**Complete .50-caliber Sniper Course, The**, by Dean Michaelis, Paladin Press, Boulder, CO, 2000. 576 pp, illustrated, \$60.00

The history from German Mauser T-Gewehr of World War 1 to the Soviet PTRD and beyond. Includes the author's Program of Instruction for Special Operations Hard-Target Interdiction Course.

**cowboy Action Shooting**, by Charly Gullett, Wolfe Publishing Co., Prescott, AZ, 1995. 400 pp., illus. Paper covers. \$24.50

The fast growing of the shooting sports is comprehensively covered in this text—the guns, loads, tactics and the fun and flavor of this Old West era competition.

**Custom Firearms Engraving**, by Tom Turpin, Krause Publications, Iola, WI, 1999. 208 pp., illustrated. \$49.95

Provides a broad and comprehensive look at the world of firearms engraving. The exquisite styles of more than 75 master engravers are shown on beautiful examples of handguns, rifles, shotguns, and other firearms, as well as knives.

**Dead On**, by Tony Noblitt and Warren Gabrielska, Paladin Press, Boulder, CO, 1998. 176 pp., illustrated. Paper covers. \$22.00

The long-range marksman's guide to extreme accuracy.

**Elmer Keith: The Other Side of A Western Legend**, by Gene Brown., Precision Shooting, Inc., Manchester, CT 2002. 1st edition. 168 pages, illustrated with black and white photographs. Softcover. \$19.95

An updated and expanded edition of his original work, incorporating new tales and information that has come to light in the past six years. Additional photos have been added, and the expanded work has been professionally edited and formatted. Gene Brown was a long time friend of Keith, and today is unquestionably the leading authority on Keith's books. The chapter on the topic is worth the price of admission by itself.

**Encyclopedia of Native American Bows, Arrows and Quivers**, by Steve Allely and Jim Hamm, The Lyons Press, N.Y., 1999. 160 pp., illustrated. \$29.95

A landmark book for anyone interested in archery history, or Native Americans.

**Exercise of Armes, The**, by Jacob de Gheyn, edited and with an introduction by Bas Kist, Dover Publications, Inc., Mineola, NY, 1999. 144 pp., illustrated. Paper covers. \$14.95

Republications of all 117 engravings from the 1607 classic military manual. A meticulously accurate portrait of uniforms and weapons of the 17th century Netherlands.

**Federal Civil War Shelter Tent, The**, by Gaede, Frederick C., Alexandria, VA: O'Donnell Publishing, 2001. 1st edition. 134 pages, and illustrated. Softcover \$20.00

This is a great monograph for all Civil War collectors. The text covers everything from government patents, records, and contract data to colorful soldier's descriptions. In addition, it is extensively illustrated with drawings and photos of over 30 known examples with close-ups of stitching, fastening buttons, and some that were decorated with soldier's art. This book is a well-presented study by a leading researcher, collector, and historian.

**Fighting Iron; A Metals Handbook for Arms Collectors**, by Art Gogan, Mowbray Publishers, Inc., Lincoln, RI, 2002. 176 pp., illustrated. \$28.00

A guide that is easy to use, explains things in simple English and covers all of the different historical periods that we are interested in.

**Fighting Submachine Gun, Machine Pistol, and Shotgun, a Hands-On Evaluation, The**, by Timothy J. Mullin, Paladin Press, Boulder, CO, 1999. 224 pp., illustrated. Paper covers. \$35.00

An invaluable reference for military, police and civilian shooters who may someday need to know how a specific weapon actually performs when the targets are shooting back and the margin of errors is measured in lives lost.

**Fireworks: A Gunsight Anthology**, by Jeff Cooper, Paladin Press, Boulder, CO, 1998. 192 pp., illus. Paper cover. \$27.00

A collection of wild, hilarious, shocking and always meaningful tales from the remarkable life of an American firearms legend.

**Frank Pachmayr: The Story of America's Master Gunsmith and his Guns**, by John Lachuk, Safari Press, Huntington Beach, CA, 1996. 254 pp.,

illus. First edition, limited, signed and slipcased. \$85.00; Second printing trade edition. \$50.00

The colorful and historically significant biography of Frank A. Pachmayr, America's own gunsmith emeritus.

**From a Stranger's Doorstep to the Kremlin Gate**, by Mikhail Kalashnikov, Ironside International Publishers, Inc., Alexandria, VA, 1999. 460 pp., illustrated. \$34.95

A biography of the most influential rifle designer of the 20th century. His AK-47 assault rifle has become the most widely used (and copied) assault rifle of this century.

**Frontier Rifleman, The**, by H.B. LaCrosse Jr., Pioneer Press, Union City, TN, 1989. 183 pp., illus. Soft covers. \$17.50

The Frontier rifleman's clothing and equipment during the era of the American Revolution, 1760-1800.

**Gatling Gun: 19th Century Machine Gun to 21st Century Vulcan, The**, by Joseph Berk, Paladin Press, Boulder, CO, 1991. 136 pp., illus. \$34.95

Here is the fascinating on-going story of a truly timeless weapon, from its beginnings during the Civil War to its current role as a state-of-the-art modern combat system.

**German Artillery of World War Two**, by Ian V. Hogg, Stackpole Books, Mechanicsburg, PA, 1997. 304 pp., illus. \$44.95

Complete details of German artillery use in WWII.

**Gone Diggin: Memoirs of A Civil War Relic Hunter**, by Toby Law. Orange, VA: Publisher's Press, 2002. 1st edition signed. ISBN: 0942365138. 151 pages, illustrated with black & white photos. \$24.95

The true story of one relic hunter's life - the author kept exacting records of every relic hunt and every relic hunter he was with working with.

**Grand Old Lady of No Man's Land: The Vickers Machine Gun**, by Dolf L. Goldsmith, Collector Grade Publications, Cobourg, Canada, 1994. 600 pp., illus. \$79.95

Goldsmith brings his years of experience as a U.S. Army armourer, machine gun collector and shooter to bear on the Vickers, in a book sure to become a classic in its field.

**Grenade Recognition Manual, Volume 1, U.S. Grenades & Accessories, The**, by Darryl W. Lynn, Service Publications, Ottawa, Canada, 1998. 112 pp., illus. Paper covers. \$29.95



This new book examines the hand grenades of the United States beginning with the hand grenades of the U.S. Civil War and continues through to the present.

**Grenade Recognition Manual, Vol. 2, British and Commonwealth Grenades and Accessories, The**, by Darryl W. Lynn, Printed by the Author, Ottawa, Canada, 2001. 201 pp., illustrated with over 200 photos and drawings. Paper covers. \$40.00

Covers British, Australian, and Canadian Grenades. It has the complete British Numbered series, most of the L series as well as the Australian and Canadian grenades in use. Also covers Launchers, fuzes and lighters, launching cartridges, fillings, and markings.

**Gun Digest 2003, 57th Edition**, edited by Ken Ramage, DBI Books a division of Krause Publications, Iola, WI, 2002. 544 pp., illustrated. Paper covers. \$27.95

This all new 56th edition continues the editorial excellence, quality, content and comprehensive cataloguing that firearms enthusiasts have come to know and expect. The most read gun book in the world for the last half century.

**Gun Engraving**, by C. Austyn, Safari Press Publication, Huntington Beach, CA, 1998. 128 pp., plus 24 pages of color photos. \$50.00

A well-illustrated book on fine English and European gun engravers. Includes a fantastic pictorial section that lists types of engravings and prices.

**Gun Notes, Volume 1**, by Elmer Keith, Safari Press, Huntington Beach, CA, 2002. 219 pp., illustrated Softcover. \$24.95

A collection of Elmer Keith's most interesting columns and feature stories that appeared in "Guns & Ammo" magazine from 1961 to the late 1970's.

**Gun Notes, Volume 2**, by Elmer Keith, Safari Press, Huntington Beach, CA, 2002. 292 pp., illustrated. Softcover. \$24.95

Covers articles from Keith's monthly column in "Guns & Ammo" magazine during the period from 1971 through Keith's passing in 1982.

**Gun Talk**, edited by Dave Moreton, Winchester Press, Piscataway, NJ, 1973. 256 pp., illus. \$9.95

A treasury of original writing by the top gun writers and editors in America. Practical advice about every aspect of the shooting sports.

**Gun That Made the Twenties Roar, The**, by Wm. J. Helmer, rev. and enlarged by George C. Nonte, Jr., The Gun Room Press, Highland Park, NJ, 1977. Over 300 pp., illus. \$24.95

Historical account of John T. Thompson and his invention, the infamous "Tommy Gun."

**Gun Trader's Guide, 24th Edition**, published by Stoeger Publishing Co., Wayne, NJ, 2002. 592 pp., illus. Paper covers. \$23.95

Complete specifications and current prices for used guns. Prices of over 5,000 handguns, rifles and shotguns both foreign and domestic.

**Gunfighter, Man or Myth?, The**, by Joseph G. Rosa, Oklahoma Press, Norman, OK, 1969. 229 pp., illus. (including weapons). Paper covers. \$14.95

A well-documented work on gunfights and gunfighters of the West and elsewhere. Great treat for all gunfighter buffs.

**Guns Illustrated 2003, 23rd Edition**, edited by Ken Ramage, DBI Books a division of Krause Publications, Iola, WI, 2003. 352 pp., illustrated. Softcovers. \$22.95

Highly informative, technical articles on a wide range of shooting topics by some of the top writers in the industry. A catalog section lists more than 3,000 firearms currently manufactured in or imported to the U.S.

**Guns Of The Old West**, by Dean K. Boorman, New York: Lyons Press, 2002. Color & b&w illus, 144 pgs. Hardcover. \$29.95

An illustrated history of the firearms used by pioneers, hunters, soldiers, lawmen, & the lawless.

**Guns & Shooting: A Selected Bibliography**, by Ray Riling, Ray Riling Arms Books Co., Phila., PA, 1982. 434 pp., illus. Limited, numbered edition. \$75.00

A limited edition of this superb bibliographical work, the only modern listing of books devoted to guns and shooting.

**Guns, Bullets, and Gunfighters**, by Jim Cirillo, Paladin Press, Boulder, CO, 1996. 119 pp., illus. Paper covers. \$16.00

Lessons and tales from a modern-day gunfighter.

**Hidden in Plain Sight**, "A Practical Guide to Concealed Handgun Carry" (Revised 2nd Edition), by Trey Bloodworth and Mike Raley, Paladin Press, Boulder, CO, 1997, 5 1/2 x 8 1/2, softcover, photos, 176 pp. \$20.00

Concerned with how to comfortably, discreetly and safely exercise the privileges granted by a CCW permit? This invaluable guide offers the latest advice on what to look for when choosing a CCW, how to dress for comfortable, effective concealed carry, traditional and more unconventional carry modes, accessory holsters, customized clothing and accessories, accessibility data based on draw-time comparisons and new holsters on the market. Includes 40 new manufacturer listings.

**HK Assault Rifle Systems**, by Duncan Long, Paladin Press, Boulder, CO, 1995. 110 pp., illus. Paper covers. \$27.95

The little known history behind this fascinating family of weapons tracing its beginnings from the ashes of World War Two to the present time.

**Hunting Time: Adventures In Pursuit Of North American Big Game: A Forty Year Chronicle, The**, by John E.Howard, Deforest, WI: Saint Huberts Press, 2002. 1st edition. ISBN: 0963309447. 537 pages, illustrated with drawings. Hardcover. \$29.95

From a novice's first hunt for whitetailed deer in his native Wisconsin, to a seasoned hunter's pursuit of a Boone and Crockett Club record book caribou in the northwest territories, the author carries the reader along on his forty year journey through the big game fields of North America.

**I Remember Skeeter**, compiled by Sally Jim Skelton, Wolfe Publishing Co., Prescott, AZ, 1998. 401 pp., illus. Paper covers. \$19.95

A collection of some of the beloved storyteller's famous works interspersed with anecdotes and tales from the people who knew best.

**Indian Tomahawks and Frontiersmen Belt Axes**, by Daniel Hartzler & James Knowles. New Windsor, MD: Privately Printed, 2002. 4th revised edition. 279 pages, illustrated with photos and drawings. Hardcover. \$65.00

This fourth revised edition has over 160 new tomahawks and trade axes added since the first edition, also a list of 205 makers names. There are 15 chapters from the earliest known tomahawks to the present day. Some of the finest tomahawks in the country are shown in this book with 31 color plates. This comprehensive study is invaluable to any collector.

**Jack O'Connor Catalogue of Letters**, by Enzler-Herring, E. Cataloguer. Agoura CA: Trophy Room Books, 2002. 262 pages, 18 illustrations. Hardcover. \$55.00

During a sixteen year period beginning in 1960, O'Connor exchanged many letters with his pal, John Jobson. Material from nearly three hundred of these has been assembled and edited by Ellen Enzler Herring and published in chronological order. A number of the letters have been reproduced in full or part. They offer considerable insight into the beloved gun editor and "Dean of Outdoor Writers" over and beyond what we know about him from his books.

**Jack O'Connor — The Legendary Life of America's Greatest Gunwriter**, by R. Anderson. Long Beach, CA: Safari Press, 2002. 1st edition. 240pp, profuse photos. Hardcover. \$29.95

This is the book all hunters in North America have been waiting for—the long-awaited biography on Jack O'Connor! Jack O'Connor was the preeminent North American big-game hunter and gunwriter of the twentieth century, and Robert Anderson's masterfully written new work is a blockbuster filled with fascinating facts and stories about this controversial character. With the full cooperation of the O'Connor children, Anderson spent three years interviewing O'Connor's family and friends as well as delving into JOC's papers, photos, and letters, including the extensive correspondence between O'Connor and Bob Householder, and the O'Connor papers from Washington State University. O'Connor's lifelong friend Buck Buckner has contributed two chapters on his experiences with the master of North American hunting.

**Kill or Get Killed**, by Col. Rex Applegate, Paladin Press, Boulder, CO, 1996. 400 pp., illus. \$49.95

The best and longest-selling book on close combat in history.

**Long-Range War: Sniping in Vietnam, The**, by Peter R. Senich, Paladin Press, Boulder, CO, 1999. 280 pp., illus. Softcover \$59.95

The most complete report on Vietnam-era sniping ever documented.

**Manual for H&R Reising Submachine Gun and Semi-Auto Rifle**, edited by George P. Dillman, Desert Publications, El Dorado, AZ, 1994. 81 pp., illus. Paper covers. \$12.95

A reprint of the Harrington & Richardson 1943 factory manual and the rare military manual on the H&R submachine gun and semi-auto rifle.

**Manufacture of Gunflints, The**, by Sydney B.J. Skertchly, facsimile reprint with new introduction by Seymour de Lotbiniere, Museum

Restoration Service, Ontario, Canada, 1984. 90 pp., illus. \$24.50

Limited edition reprinting of the very scarce London edition of 1879.

**Master Tips**, by J. Winokur, Potshot Press, Pacific Palisades, CA, 1985. 96 pp., illus. Paper covers. \$11.95

Basics of practical shooting.

**Military and Police Sniper, The**, by Mike R. Lau, Precision Shooting, Inc., Manchester, CT, 1998. 352 pp., illustrated. Paper covers. \$44.95

Advanced precision shooting for combat and law enforcement.

**Military Rifle & Machine Gun Cartridges**, by Jean Huon, Paladin Press, Boulder, CO, 1990. 392 pp., illus. \$34.95

Describes the primary types of military cartridges and their principal loadings, as well as their characteristics, origin and use.

**Military Small Arms of the 20th Century, 7th Edition**, by Ian V. Hogg and John Weeks, DBI Books, a division of Krause Publications, Iola, WI, 2000. 416 pp., illustrated. Paper covers. \$24.95

Cover small arms of 46 countries. Over 800 photographs and illustrations.

**Modern Custom Guns, Walnut, Steel, and Uncommon Artistry**, by Tom Turpin, Krause Publications, Iola, WI, 1997. 206 pp., illus. \$49.95

From exquisite engraving to breathtaking exotic woods, the mystique of today's custom guns is expertly detailed in word and awe-inspiring color photos of rifles, shotguns and handguns.

**Modern Law Enforcement Weapons & Tactics, 2nd Edition**, by Tom Ferguson, DBI Books, a division of Krause Publications, Iola, WI, 1991. 256 pp., illus. Paper covers. \$18.95

An in-depth look at the weapons and equipment used by law enforcement agencies of today.

**Modern Machine Guns**, by John Walter, Stackpole Books, Inc. Mechanicsburg, PA, 2000. 144 pp., with 146 illustrations. \$22.95

A compact and authoritative guide to post-war machine-guns. A gun-by-gun directory identifying individual variants and types including detailed evaluations and technical data.

**Modern Sporting Guns**, by Christopher Austyn, Safari Press, Huntington Beach, CA, 1994. 128 pp., illus. \$40.00

A discussion of the "best" English guns; round action, over-and-under, boxlocks, hammer guns, bolt action and double rifles as well as

accessories.

**More Complete Cannoneer, The**, by M.C. Switlik, Museum & Collectors Specialties Co., Monroe, MI, 1990. 199 pp., illus. \$19.95

Compiled agreeably to the regulations for the U.S. War Department, 1861, and containing current observations on the use of antique cannons.

**MP-40 Machine Gun, The**, Desert Publications, El Dorado, AZ, 1995. 32 pp., illus. Paper covers. \$11.95

A reprint of the hard-to-find operating and maintenance manual for one of the most famous machine guns of World War II.

**Naval Percussion Locks and Primers**, by Lt. J. A. Dahlgren, Museum Restoration Service, Bloomfield, Canada, 1996. 140 pp., illus. \$35.00

First published as an Ordnance Memoranda in 1853, this is the finest existing study of percussion locks and primers origin and development.

**Official Soviet AKM Manual, The**, translated by Maj. James F. Gebhardt (Ret.), Paladin Press, Boulder, CO, 1999. 120 pp., illustrated. Paper covers. \$18.00

This official military manual, available in English for the first time, was originally published by the Soviet Ministry of Defence. Covers the history, function, maintenance, assembly and disassembly, etc. of the 7.62mm AKM assault rifle.

**One-Round War: U.S.M.C. Scout-Snipers in Vietnam, The**, by Peter Senich, Paladin Press, Boulder, CO, 1996. 384 pp., illus. Paper covers \$59.95

Sniping in Vietnam focusing specifically on the Marine Corps program.

**Parker Brothers: Knight of the Trigger**, by Ed Muderlak. A Fact-Based Historical Novel Describing the Life and Times of Captain Arthur William du Bray, 1848-1928. Davis, IL: Old Reliable Publishing, 2002. 223 pages. \$25.00

Knight of the Trigger tells the story of the Old West when Parker's most famous gun salesman traveled the country by rail, competing in the pigeon ring, hunting with the rich and famous, and selling the "Old Reliable" Parker shotgun. The life and times of Captain Arthur William du Bray, Parker Brothers' on-the-road sales agent from 1884 to 1926, is described in a novelized version of his interesting life.

**Powder Horns and Their Architecture and Decoration as Used by the Soldier, Indian, Sailor and Traders of the Era**, by Madison Grant. York,

PA: Privately Printed, 1987. 165 pages, profusely illustrated. Hardcover. \$45.00

Covers homemade pieces from the late eighteenth and early nineteenth centuries.

**Practically Speaking: An Illustrated Guide — The Game, Guns and Gear of the International Defensive Pistol Association**, by Walt Rauch. Lafayette Hills, PA: Privately Printed, 2002. 1st edition. Softcover. \$24.95

The game, guns and gear of the International Defensive Pistol Association with real-world applications. 79 pages, illustrated with drawings and color photos.

**Present Sabers: A Popular History of the U.S. Horse Cavalry**, by Allan T. Heninger, Tucson, AZ: Excalibur Publications, 2002. 1st edition. 160 pages, with 148 photographs, 45 illustrations and 4 charts. Softcover. \$24.95

An illustrated history of America's involvement with the horse cavalry, from its earliest beginnings during the Revolutionary War through its demise in World War 2. The book also contains several appendices, as well as depictions of the regular insignia of all the U.S. Cavalry units.

**Principles of Personal Defense**, by Jeff Cooper, Paladin Press, Boulder, CO, 1999. 56 pp., illustrated. Paper covers. \$14.00

This revised edition of Jeff Cooper's classic on personal defense offers great new illustrations and a new preface while retaining the timeliness theory of individual defense behavior presented in the original book.

**Quotable Hunter, The**, edited by Jay Cassell and Peter Fiduccia, The Lyons Press, N.Y., 1999. 224 pp., illustrated. \$20.00

This collection of more than three hundred memorable quotes from hunters through the ages captures the essence of the sport, with all its joys idiosyncrasies, and challenges.

**Rifleman Went to War, A**, by H. W. McBride, Lancer Militaria, Mt. Ida, AR, 1987. 398 pp., illus. \$29.95

The classic account of practical marksmanship on the battlefields of World War I.

**Sharpshooting for Sport and War**, by W.W. Greener, Wolfe Publishing Co., Prescott, AZ, 1995. 192 pp., illus. \$30.00

This classic reprint explores the first expanding bullet; service rifles; shooting positions; trajectories; recoil; external ballistics; and other

valuable information.

**Shooter's Bible 2003, The**, No. 94, edited by William S. Jarrett, Stoeger Publishing Co., Wayne, NJ, 2002. 576 pp., illustrated. Paper covers. \$23.95

Over 3,000 firearms currently offered by major American and foreign gunmakers. Represented are handguns, rifles, shotguns and black powder arms with complete specifications and retail prices.

**Shooting to Live**, by Capt. W. E. Fairbairn & Capt. E. A. Sykes, Paladin Press, Boulder, CO, 1997, 4 1/2 x 7, soft cover, illus., 112 pp. \$14.00

Shooting to Live is the product of Fairbairn's and Sykes' practical experience with the handgun. Hundreds of incidents provided the basis for the first true book on life-or-death shootouts with the pistol. Shooting to Live teaches all concepts, considerations and applications of combat pistol craft.

**Shooting Buffalo Rifles of the Old West**, by Mike Venturino, MLV Enterprises, Livingston, MT, 2002. 278 pages, illustrated with black and white photos. Softcover. \$30.00

This tome will take you through the history, the usage, the many models, and the actual shooting (and how to's) of the many guns that saw service on the Frontier and are lovingly called "Buffalo Rifles" today. If you love to shoot your Sharps, Ballards, Remingtons, or Springfield "Trapdoors" for hunting or competition, or simply love Old West history, your library WILL NOT be complete without this latest book from Mike Venturino!

**Shooting Colt Single Actions**, by Mike Venturino, MLV Enterprises, Livingston, MT 1997. 205 pp., illus. Black and white photos throughout. Softcover. \$25.00

A complete examination of the Colt Single Action including styles, calibers and generations.

**Shooting Lever Guns Of The Old West**, by Mike Venturino, MLV Enterprises, Livingston, MT, 1999. 300 pp., illustrated. Softcover. \$27.95

Shooting the lever action type repeating rifles of our American West.

**Shooting Sixguns of the Old West**, by Mike Venturino, MLV Enterprises, Livingston, MT, 1997. 221 pp., illus. Paper covers. \$26.50

A comprehensive look at the guns of the early West: Colts, Smith & Wesson and Remingtons, plus blackpowder and reloading specs.

**Sniper Training, FM 23-10**, Reprint of the U.S. Army field manual of August, 1994, Paladin Press, Boulder, CO, 1995. 352pp., illus. Paper



covers. \$30.00

The most up-to-date U.S. military sniping information and doctrine.

**Sniping in France**, by Major H. Hesketh-Prichard, Lancer Militaria, Mt. Ida, AR, 1993. 224 pp., illus. \$24.95

The author was a well-known British adventurer and big game hunter. He was called upon in the early days of "The Great War" to develop a program to offset an initial German advantage in sniping. How the British forces came to overcome this advantage.

**Special Warfare: Special Weapons**, by Kevin Dockery, Emperor's Press, Chicago, IL, 1997. 192 pp., illus. \$29.95

The arms and equipment of the UDT and SEALs from 1943 to the present.

**Sporting Collectibles**, by Dr. Stephen R. Irwin, Stoeger Publishing Co., Wayne, NJ, 1997. 256 pp., illus. Paper covers. \$19.95

A must book for serious collectors and admirers of sporting collectibles.

**Sporting Craftsmen: A Complete Guide to Contemporary Makers of Custom-Built Sporting Equipment, The**, by Art Carter, Countrysport Press, Traverse City, MI, 1994. 240 pp., illus. \$35.00

Profiles leading makers of centerfire rifles; muzzleloading rifles; bamboo fly rods; fly reels; flies; waterfowl calls; decoys; handmade knives; and traditional longbows and recurves.

**Street Smart Gun Book, The**, by John Farnam, Police Bookshelf, Concord, NH, 1986. 45 pp., illus. Paper covers. \$11.95

Weapon selection, defensive shooting techniques, and gunfight-winning tactics from one of the world's leading authorities.

**Stress Fire, Vol. 1: Stress Fighting for Police**, by Massad Ayoob, Police Bookshelf, Concord, NH, 1984. 149 pp., illus. Paper covers. \$11.95

Gunfighting for police, advanced tactics and techniques.

**Survival Guns**, by Mel Tappan, Desert Publications, El Dorado, AZ, 1993. 456 pp., illus. Paper covers. \$25.00

Discusses in a frank and forthright manner which handguns, rifles and shotguns to buy for personal defense and securing food, and the ones to avoid.

**Tactical Advantage, The**, by Gabriel Suarez, Paladin Press, Boulder, CO, 1998. 216 pp., illustrated. Paper covers. \$22.00

Learn combat tactics that have been tested in the world's toughest schools.

**Tactical Marksman**, by Dave M. Lauch, Paladin Press, Boulder, CO, 1996. 165 pp., illus. Paper covers. \$35.00

A complete training manual for police and practical shooters.

**Thompson Guns 1921-1945**, Anubis Press, Houston, TX, 1980. 215 pp., illus. Paper covers. \$15.95

Facsimile reprinting of five complete manuals on the Thompson submachine gun.

**To Ride, Shoot Straight, and Speak the Truth**, by Jeff Cooper, Paladin Press, Boulder, CO, 1997, 5 1/2 x 8 1/2, soft-cover, illus., 384 pp. \$32.00

Combat mind-set, proper sighting, tactical residential architecture, nuclear war -these are some of the many subjects explored by Jeff Cooper in this illustrated anthology. The author discusses various arms, fighting skills and the importance of knowing how to defend oneself, and one's honor, in our rapidly changing world.

**Trailriders Guide to Cowboy Action Shooting**, by James W. Barnard, Pioneer Press, Union City, TN, 1998. 134 pp., plus 91 photos, drawings and charts. Paper covers. \$24.95

Covers the complete spectrum of this shooting discipline, from how to dress to authentic leather goods, which guns are legal, calibers, loads and ballistics.

**Ultimate Sniper, The**, by Major John L. Plaster, Paladin Press, Boulder, CO, 1994. 464 pp., illus. Paper covers. \$49.95

An advanced training manual for military and police snipers.

**Uniforms and Equipment of the Imperial Japanese Army in World War 2**, by Mike Hewitt. Atglen, PA: Schiffer Publications, 2002. 176 pages, with over 520 color and b/w photos. Hardcover. \$59.95

**Unrepentant Sinner**, by Col. Charles Askins, Paladin Press, Boulder, CO, 2000. 322 pp., illustrated. \$29.95

The autobiography of Colonel Charles Askins.

**U.S. Marine Corp Rifle and Pistol Marksmanship, 1935**, reprinting of a government publication, Lancer Militaria, Mt. Ida, AR, 1991. 99 pp., illus. Paper covers. \$11.95

The old corps method of precision shooting.

**U.S. Marine Corps Scout/Sniper Training Manual**, Lancer Militaria, Mt. Ida, AR, 1989. Soft covers. \$27.95

Reprint of the original sniper training manual used by the Marksmanship Training Unit of the Marine Corps Development and Education Command in Quantico, Virginia.

**U.S. Marine Corps Scout-Sniper, World War II and Korea**, by Peter R. Senich, Paladin Press, Boulder, CO, 1994. 236 pp., illus. \$44.95

The most thorough and accurate account ever printed on the training, equipment and combat experiences of the U.S. Marine Corps Scout-Snipers.

**U.S. Marine Corps Sniping**, Lancer Militaria, Mt. Ida, AR, 1989. Irregular pagination. Soft covers. \$18.95

A reprint of the official Marine Corps FMFM1-3B.

**U.S. Marine Uniforms—1912-1940**, by Jim Moran. Williamstown, NJ: Phillips Publications, 2001. 174 pages, illustrated with black and white photographs. Hardcover. \$49.95

**Weapons of the Waffen-SS**, by Bruce Quarrie, Sterling Publishing Co., Inc., 1991. 168 pp., illus. \$24.95.

An in-depth look at the weapons that made Hitler's Waffen-SS the fearsome fighting machine it was.

**Winchester Era, The**, by David Madis, Art & Reference House, Brownsville, TX, 1984. 100 pp., illus. \$19.95

Story of the Winchester company, management, employees, etc.

**With British Snipers to the Reich**, by Capt. C. Shore, Lander Militaria, Mt. Ida, AR, 1988. 420 pp., illus. \$29.95

One of the greatest books ever written on the art of combat sniping.

**World's Machine Pistols and Submachine Guns - Vol. 2a 1964 to 1980, The**, by Nelson & Musgrave, Ironside International, Alexandria, VA, 2000. 673 pages, illustrated. \$59.95

Containing data, history and photographs of over 200 weapons. With a special section covering shoulder stocked automatic pistols, 100 additional photos.

**World's Sniping Rifles, The**, by Ian V. Hogg, Paladin Press, Boulder, CO, 1998. 144 pp., illustrated. \$22.95

A detailed manual with descriptions and illustrations of more than 50 high-precision rifles from 14 countries and a complete analysis of sights

and systems.

## **Handguns**

**Advanced Master Handgunning**, by Charles Stephens, Paladin Press, Boulder, CO., 1994. 72 pp., illus. Paper covers. \$14.00

Secrets and surefire techniques for winning handgun competitions.

**Advanced Tactical Marksman** More High Performance Techniques for Police, Military, and Practical Shooters, by Lauck, Dave M. Paladin Press, Boulder, CO 2002. 1st edition. 232 pages, photos, illus. Softcover. \$35.00

Lauck, one of the most respected names in high-performance shooting and gunsmithing, refines and updates his 1st book . Dispensing with overcomplicated mil-dot formulas and minute-of-angle calculations, Lauck shows you how to achieve superior accuracy and figure out angle shots, streamline the zero process, hit targets at 2,000 yards, deal with dawn and dusk shoots, train for real-world scenarios, choose optics and accessories and create a mobile shooting platform. He also demonstrates the advantages of his custom reticle design and describes important advancements in the MR-30PG shooting system.

**American Beauty: The Prewar Colt National Match Government Model Pistol**, by Timothy Mullin, Collector Grade Publications, Canada, 1999. 72 pp., 69 illus. \$34.95

69 illustrations, 20 in full color photos of factory engraved guns and other authenticated upgrades, including rare 'double-carved' ivory grips.

**Ayoob Files: The Book, The**, by Massad Ayoob, Police Bookshelf, Concord, NH, 1995. 223 pp., illus. Paper covers. \$14.95

The best of Massad Ayoob's acclaimed series in American Handgunner magazine.

**Belgian Browning Pistols 1889-1949, The**, by Vanderlinden, Anthony. Wet Dog Publications, Geensboro, NC 2001. Limited edition of 2000 copies, signed by the author. 243 pages, plus index. Illustrated with black and white photos. Hardcover. \$65.00

Includes the 1899 compact, 1899 Large, 1900,01903, Grand Browning, 1910, 1922 Grand Rendement and high power pistols. Also includes a chapter on holsters.

**Big Bore Handguns**, by Taffin, John, Krause Publishing, Iola, WI: 2002. 1st edition. 352 Pages, 320 b&w photos with a 16-page color section. Hardcover. \$39.95

Gives honest reviews and an inside look at shooting, hunting, and competing with the biggest handguns around. Covers handguns from major gunmakers, as well as handgun customizing, accessories, reloading, and cowboy activities. Significant coverage is also given to handgun customizing, accessories, reloading, and popular shooting hobbies including hunting and cowboy activities. Accessories consist of stocks, handgun holster rigs, and much more. Firearms include single-shot pistols, revolvers, and semi-automatics.

**Big Bore Sixguns**, by John Taffin, Krause Publications, Iola, WI, 1997. 336 pp., illus. \$39.95

The author takes aim on the entire range of big bores from .357 Magnums to .500 Maximums, single actions and cap-and-ball sixguns to custom touches for big bores.

**Browning High Power Automatic Pistol (Expanded Edition), The**, by Blake R. Stevens, Collector Grade Publications, Canada, 1996. 310 pages, with 313 illus. \$49.95

An in-depth chronicle of seventy years of High Power history, from John M Browning's original 16-shot prototypes to the present. Profusely illustrated with rare original photos and drawings from the FN Archive to describe virtually every sporting and military version of the High Power. The numerous modifications made to the basic design over the years are, for the first time, accurately arranged in chronological order, thus permitting the dating of any High Power to within a few years of its production. Full details on the WWII Canadian-made Inglis Browning High Power pistol. The Expanded Edition contains 30 new pages on the interesting Argentine full-auto High Power, the latest FN 'MK3' and BDA9 pistols, plus FN's revolutionary P90 5.7x28mm Personal Defence Weapon, and more!

**Browning Hi-Power Pistols**, Desert Publications, Cornville, AZ, 1982. 20 pp., illus. Paper covers. \$11.95

Covers all facets of the various military and civilian models of the Browning Hi-Power pistol.

**Canadian Military Handguns 1855-1985**, by Clive M. Law, Museum Restoration Service, Bloomfield, Ont. Canada, 1994. 130pp., illus. \$40.00

A long-awaited and important history for arms historians and pistol collectors.

**Collecting U.S. Pistols & Revolvers, 1909-1945**, by J. C. Harrison. The Arms Chest, Okla. City, OK. 1999. 2nd edition (revised). 185 pages, illus. with pictures and drawings. Spiral bound. \$35.00

Valuable and detailed reference book for the collector of U.S. Pistols & Revolvers. Identifies standard issue original military models of the M1911, M1911A1 and M1917Cal .45 Pistols and Revolvers as produced by all manufacturers from 1911 through 1945. Plus .22 ACE Models, National Match Models, and similar foreign military models produced by Colt or manufactured under Colt license. Plus Arsenal repair, refinish and Lend-Lease Models.

**Colt .45 Auto Pistol, The**, compiled from U.S. War Dept. Technical Manuals, and reprinted by Desert Publications, Cornville, AZ, 1978. 80 pp., illus. Paper covers. \$11.95

Covers every facet of this famous pistol from mechanical training, manual of arms, disassembly, repair and replacement of parts.

**Colt Automatic Pistols**, by Donald B. Bady, Pioneer Press, Union City, TN, 1999. 368 pp., illustrated. Softcover. \$19.95

A revised and enlarged edition of a key work on a fascinating subject. Complete information on every Colt automatic pistol.

**Combat Handgunnery, 5th Edition**, by Chuck Taylor, Krause Publications, Iola, WI, 2002. 256 pp., illus. Paper covers. \$21.95

This all-new edition looks at real world combat handgunnery from three different perspectives—military, police and civilian.

**Combat Revolvers**, by Duncan Long, Paladin Press, Boulder, CO, 1999, 8 1/2 x 11, soft cover, 115 photos, 152 pp. \$21.95

This is an uncompromising look at modern combat revolvers. All the major foreign and domestic guns are covered: the Colt Python, S&W Model 29, Ruger GP 100 and hundreds more. Know the gun that you may one day stake your life on.

**Complete Guide to Compact Handguns**, by Gene Gangarosa, Jr., Stoeger Publishing Co., Wayne, NJ, 1997. 228 pp., illus. Paper covers. \$22.95

Includes hundreds of compact firearms, along with text results conducted by the author.

**Complete Guide to Service Handguns**, by Gene Gangarosa, Jr., Stoeger Publishing Co., Wayne, NJ, 1998. 320 pp., illus. Paper covers. \$22.95

The author explores the revolvers and pistols that are used around the globe by military, law enforcement and civilians.

**Concealable Pocket Pistols: How to Choose and Use Small-Caliber Handguns**, McLeod, Terence. Paladin Press, 2001. 1st edition. 80 pages. Softcover. \$14.00

Small-caliber handguns are often maligned as too puny for serious self-defense, but millions of Americans own and carry these guns and have used them successfully to stop violent assaults. This is the first book ever devoted to eliminating the many misconceptions about the usefulness of these popular guns. "Pocket pistols" are small, easily concealed, inexpensive semiautomatic handguns in .22, .25, .32 and .380 calibers. Their small size and hammerless design enable them to be easily concealed and carried so they are immediately accessible in an emergency. Their purpose is not to knock an assailant off his feet with fire-breathing power (which no handgun is capable of doing) but simply to deter or stop his assault by putting firepower in your hands when you need it most. *Concealable Pocket Pistols* addresses every aspect of owning, carrying and shooting small-caliber handguns in a realistic manner. It cuts right to the chase and recommends a handful of the best pistols on the market today as well as the best ammunition for them. It then gets into the real-world issues of how to carry a concealed pocket pistol, how to shoot it under stress and how to deal with malfunctions quickly and efficiently. In an emergency, a small-caliber pistol in the pocket is better than the .357 Magnum left at home. Find out what millions of Americans already know about these practical self-defense tools.

**Custom Government Model Pistol, The**, by Layne Simpson, Wolfe Publishing Co., Prescott, AZ, 1994. 639 pp., illus. Paper covers. \$26.95

The book about one of the world's greatest firearms and the things pistolsmiths do to make it even greater.

**CZ-75 Family: The Ultimate Combat Handgun, The**, by J.M. Ramos, Paladin Press, Boulder, CO, 1990. 100 pp., illus. Soft covers. \$25.00

An in-depth discussion of the early-and-late model CZ-75s, as well as the many newest additions to the Czech pistol family.

**Encyclopedia of Pistols & Revolvers**, by A.E. Hartnik, Knickerbocker Press, New York, NY, 1997. 272 pp., illus. \$19.95

A comprehensive encyclopedia specially written for collectors and owners of pistols and revolvers.

**Engraved Handguns of .22 Calibre**, by John S. Laidacker, Atglen, PA: Schiffer Publications, 2003. 1st edition. 192 pages, with over 400 color and b/w photos. \$69.95

**Experiments of a Handgunner**, by Walter Roper, Wolfe Publishing Co., Prescott, AZ, 1989. 202 pp., illus. \$37.00

A limited edition reprint. A listing of experiments with functioning parts of handguns, with targets, stocks, rests, handloading, etc.

**Farnam Method of Defensive Handgunning, The**, by John S. Farnam, Police Bookshelf, 1999. 191 pp., illus. Paper covers. \$24.00

A book intended to not only educate the new shooter, but also to serve as a guide and textbook for his and his instructor's training courses.

**Fast and Fancy Revolver Shooting**, by Ed. McGivern, Anniversary Edition, Winchester Press, Piscataway, NJ, 1984. 484 pp., illus. \$19.95

A fascinating volume, packed with handgun lore and solid information by the acknowledged dean of revolver shooters.

**German Handguns: The Complete Book of the Pistols and Revolvers of Germany, 1869 To The Present**, by Ian Hogg. Greenhill Publishing, 2001. 320 pages, 270 illustrations. Hardcover. \$49.95

Ian Hogg examines the full range of handguns produced in Germany from such classics as the Luger M1908, Mauser HsC and Walther PPK, to more unusual types such as the Reichsrevolver M1879 and the Dreyse 9mm. He presents the key data (length, weight, muzzle velocity, and range) for each weapon discussed and also gives its date of introduction and service record, evaluates and discusses peculiarities, and examines in detail particular strengths and weaknesses.

**Glock: The New Wave in Combat Handguns**, by Peter Alan Kasler, Paladin Press, Boulder, CO, 1993. 304 pp., illus. \$27.00

Kasler debunks the myths that surround what is the most innovative handgun to be introduced in some time.

**Glock's Handguns**, by Duncan Long, Desert Publications, El Dorado, AR, 1996. 180 pp., illus. Paper covers. \$19.95

An outstanding volume on one of the world's newest and most successful firearms of the century.



**Gun Digest Book of the 1911, The**, by Patrick Sweeney. Krause Publications, Iola, WI, 2002. 336 pages, with 700 b&w photos. Softcover. \$27.95

Compete guide of all models and variations of the Model 1911. The author also includes repair tips and information on buying a used 1911.

**Hand Cannons: The World's Most Powerful Handguns**, by Duncan Long, Paladin Press, Boulder, CO, 1995. 208 pp., illus. Paper covers. \$22.00

Long describes and evaluates each powerful gun according to their features.

**Handgun, The**, by Geoffrey Boothroyd, Safari Press, Inc., Huntington Beach, CA, 1999. 566 pp., illustrated. \$50.00

A very detailed history of the handgun. Now revised and a completely new chapter written to take account of developments since the 1970 edition.

**Handguns 2003, 14th Edition**, edited by Ken Ramage, DBI Books a division of Krause Publications, Iola, WI, 2002. 352 pp., illustrated. Paper covers. \$22.95

Top writers in the handgun industry give you a complete report on new handgun developments, testfire reports on the newest introductions and previews on what's ahead.

**Handgun Stopping Power "The Definitive Study"**, by Evan P. Marshall & Edwin J. Sanow, Paladin Press, Boulder, CO, 1997, soft cover, photos, 240 pp. \$45.00

Dramatic first-hand accounts of the results of handgun rounds fired into criminals by cops, storeowners, cabbies and others are the heart and soul of this long-awaited book. This is the definitive methodology for predicting the stopping power of handgun loads, the first to take into account what really happens when a bullet meets a man.

**Heckler & Koch's Handguns**, by Duncan Long, Desert Publications, El Dorado, AR, 1996. 142 pp., illus. Paper covers. \$19.95.

Traces the history and the evolution of H&K's pistols from the company's beginning at the end of WWII to the present.

**Hidden in Plain Sight**, by Trey Bloodworth & Mike Raley, Professional Press, Chapel Hill, NC, 1995. Paper covers. \$19.95.

A practical guide to concealed handgun carry.

**High Standard: A Collectors Guide to the Hamden & Hartford Target Pistols**, Dance, Tom. Andrew Mowbray, Inc., Lincoln, RI: 1999. 192 pp., Heavily illustrated with black & white photographs and technical drawings. \$24.00

From Citation to Supermatic, all of the production models and specials made from 1951 to 1984 are covered according to model number or series, making it easy to understand the evolution to this favorite of shooters and collectors.

**High Standard Automatic Pistols 1932-1950**, by Charles E. Petty, The Gunroom Press, Highland Park, NJ, 1989. 124 pp., illus. \$14.95

A definitive source of information for the collector of High Standard arms.

**Hi-Standard Pistols and Revolvers, 1951-1984**, by James Spacek, James Spacek, Chesire, CT, 1998. 128 pp., illustrated. Paper covers. \$12.50

Technical details, marketing features and instruction/parts manual of every model High Standard pistol and revolver made between 1951 and 1984. Most accurate serial number information available.

**Hi-Standard Pistol Guide, The**, by Burr Leyson, Duckett's Sporting Books, Tempe AZ, 1995. 128 pp., illus. Paper covers. \$26.00

Complete information on selection, care and repair, ammunition, parts, and accessories.

**How to Become a Master Handgunner: The Mechanics of X-Count Shooting**, by Charles Stephens, Paladin Press, Boulder, CO, 1993. 64 pp., illus. Paper covers. \$14.00

Offers a simple formula for success to the handgunner who strives to master the technique of shooting accurately.

**Illustrated Encyclopedia of Handguns**, by A.B. Zhuk, Stackpole Books, Mechanicsburg, PA, 2002. 256 pp., illus. Softcover, \$24.95

Identifies more than 2,000 military and commercial pistols and revolvers with details of more than 100 popular handgun cartridges.

**Inglis Diamond: The Canadian High Power Pistol, The**, by Clive M. Law, Collector Grade Publications, Canada, 2001. 312 pp., illustrated. \$49.95

This definitive work on Canada's first and indeed only mass produced handgun, in production for a very brief span of time and consequently made in relatively few numbers, the venerable Inglis-made Browning

High Power covers the pistol's initial history, the story of Chinese and British adoption, use post-war by Holland, Australia, Greece, Belgium, New Zealand, Peru, Brasil and other countries. All new information on the famous light-weights and the Inglis Diamond variations. Completely researched through official archives in a dozen countries. Many of the bewildering variety of markings have never been satisfactorily explained until now. Also included are many photos of holsters and accessories.

**Instinct Combat Shooting**, by Chuck Klein, The Goose Creek, IN, 1989. 49 pp., illus. Paper covers. \$12.00

Defensive handgunning for police.

**Know Your 45 Auto Pistols—Models 1911 & A1**, by E.J. Hoffschmidt, Blacksmith Corp., Southport, CT, 1974. 58 pp., illus. Paper covers. \$14.95

A concise history of the gun with a wide variety of types and copies.

**Know Your Ruger Single Actions: The Second Decade 1963-1973**, by John C. Dougan. Blacksmith Corp., North Hampton, OH, 1994. 143 pp., illus. Paper covers. \$19.95

**Know Your Ruger S/A Revolvers 1953-1963 (Revised Edition)**, by John C. Dougan. Blacksmith Corp., North Hampton, OH, 2002. 191 pp., illus. Paper covers. \$19.95

**Know Your Walther P38 Pistols**, by E.J. Hoffschmidt, Blacksmith Corp., Southport, CT, 1974. 77 pp., illus. Paper covers. \$14.95

Covers the Walther models Armeé, M.P., H.P., P.38—history and variations.

**Know Your Walther PP & PPK Pistols**, by E.J. Hoffschmidt, Blacksmith Corp., Southport, CT, 1975. 87 pp., illus. Paper covers. \$14.95

A concise history of the guns with a guide to the variety and types.

**La Connaissance du Luger, Tome 1**, by Gerard Henrotin, H & L Publishing, Belgium, 1996. 144 pages, illustrated. \$45.00

(The Knowledge of Luger, Volume 1, translated.) Black & white and color photos. French text.

**Living with Glocks: The Complete Guide to the New Standard in Combat Handguns**, by Robert H Boatman, Boulder, CO: Paladin Press, 2002. 1st edition. ISBN: 1581603401. 184 pages, illustrated. Hardcover. \$29.95

In this book he explains why in no uncertain terms. In addition to demystifying the enigmatic Glock trigger, Boatman describes and

critiques each Glock model in production. Separate chapters on the G36, the enhanced G20 and the full-auto G18 emphasize the job-specific talents of these standout models for those seeking insight on which Glock pistol might best meet their needs. And for those interested in optimizing their Glock's capabilities, this book addresses all the peripherals – holsters, ammo, accessories, silencers, modifications and conversions, training programs and more. Whether your focus is on concealed carry, home protection, hunting, competition, training or law enforcement.

**Luger Handbook, The**, by Aaron Davis, Krause Publications, Iola, WI, 1997. 112 pp., illus. Paper covers. \$9.95

Now you can identify any of the legendary Luger variations using a simple decision tree. Each model and variation includes pricing information, proof marks and detailed attributes in a handy, user-friendly format. Plus, it's fully indexed. Instantly identify that Luger!

**Lugers of Ralph Shattuck**, by Ralph Shattuck, Peoria, AZ, 2000. 49 pages, illus. Hardcover. \$29.95

49 pages, illustrated with maps and full color photos of here to now never before shown photos of some of the rarest lugers ever. Written by one of the world's renowned collectors. A MUST have book for any Luger collector.

**Lugers at Random (Revised Format Edition)**, by Charles Kenyon, Jr., Handgun Press, Glenview, IL, 2000. 420 pp., illus. \$59.95

A new printing of this classic, comprehensive reference for all Luger collectors.

**Luger Story, The**, by John Walter, Stackpole Books, Mechanicsburg, PA, 2001. 256 pp., illus. Paper Covers. \$19.95

The standard history of the world's most famous handgun.

**Mauser Self-Loading Pistol, The**, by Belford & Dunlap, Borden Publ. Co., Alhambra, CA. Over 200 pp., 300 illus., large format. \$29.95

The long-awaited book on the "Broom Handles," covering their inception in 1894 to the end of production. Complete and in detail: pocket pistols, Chinese and Spanish copies, etc.

**Mental Mechanics of Shooting: How to Stay Calm at the Center**, by Vishnu Karmakar and Thomas Whitney. Littleton, CO: Center Vision, Inc., 2001. 144 pages. Softcover. \$19.95

Not only will this book help you stay free of trigger jerk, it will help you in all areas of your shooting.

**9mm Parabellum; The History & Development of the World's 9mm Pistols & Ammunition**, by Klaus-Peter Konig and Martin Hugo, Schiffer Publishing Ltd., Atglen, PA, 1993. 304 pp., illus. \$39.95

Detailed history of 9mm weapons from Belgium, Italy, Germany, Israel, France, USA, Czechoslovakia, Hungary, Poland, Brazil, Finland and Spain.

**Official 9mm Markarov Pistol Manual, The**, translated into English by Major James Gebhardt, U.S. Army (Ret.), Desert Publications, El Dorado, AR, 1996. 84 pp., illus. Paper covers. \$12.95

The information found in this book will be of enormous benefit and interest to the owner or a prospective owner of one of these pistols.

**Official Soviet 7.62mm Handgun Manual, The**, by Translation by Maj. James F. Gebhardt Ret.), Paladin Press, Boulder, CO, 1997, soft cover, illus., 104 pp. \$20.00

This Soviet military manual, now available in English for the first time, covers instructions for use and maintenance of two side arms, the Nagant 7.62mm revolver, used by the Russian tsarist armed forces and later the Soviet armed forces, and the Tokarev 7.62mm semi-auto pistol, which replaced the Nagant.

**P-08 Parabellum Luger Automatic Pistol, The**, edited by J. David McFarland, Desert Publications, Cornville, AZ, 1982. 20 pp., illus. Paper covers. \$13.95

Covers every facet of the Luger, plus a listing of all known Luger models.

**P08 Luger Pistol, The**, by de Vries & Martens. Alexandria, VA: Ironside International, 2002. 152 pages, illustrated with 200 high quality black & white photos. Hardcover. \$34.95

Covers all essential information on history and development, ammunition and accessories, codes and markings, and contains photos of nearly every model and accessory. Includes a unique selection of original German WWII propoganda photos, most never published before.

**P-38 Automatic Pistol**, by Gene Gangarosa, Jr., Stoeger Publishing Co., S. Hackensack, NJ, 1993. 272 pp., illus. Paper covers. \$16.95

This book traces the origins and development of the P-38, including the momentous political forces of the World War II era that caused its near demise and, later, its rebirth.

**P-38 Pistol: The Walther Pistols, 1930-1945. Volume 1, The,** by Warren Buxton, Ucross Books, Los Alamos, MN 1999. \$68.50

A limited run reprint of this scarce and sought-after work on the P-38 Pistol. 328 pp. with 160 illustrations.

**P-38 Pistol: The Contract Pistols, 1940-1945. Volume 2, The,** by Warren Buxton, Ucross Books, Los Alamos, MN 1999. 256 pp. with 237 illustrations. \$68.50

**P-38 Pistol: Postwar Distributions, 1945-1990. Volume 3, The,** by Warren Buxton, Ucross Books, Los Alamos, MN 1999. \$68.50

Plus an addendum to Volumes 1 & 2. 272 pp. with 342 illustrations.

**Parabellum - A Technical History of Swiss Lugers,** by V. Bobba, Italy. 1998. 224pp, profuse color photos, large format. \$100.00

This is the most beautifully illustrated and well-documented book on the Swiss Lugers yet produced. This splendidly produced book features magnificent images while giving an incredible amount of detail on the Swiss Luger. In-depth coverage of key issues include: the production process, pistol accessories, charts with serial numbers, production figures, variations, markings, patent drawings, etc. Covers the Swiss Luger story from 1894 when the first Bergmann-Schmeisser models were tested till the commercial model 1965. Shows every imaginable production variation in amazing detail and full color! A must for all Luger collectors. This work has been produced in an extremely attractive package using quality materials throughout and housed in a protective slipcase.

**Report of Board on Tests of Revolvers and Automatic Pistols,** From the Annual Report of the Chief of Ordnance, 1907. Reprinted by J.C. Tillinghast, Marlow, NH, 1969. 34 pp., 7 plates, paper covers. \$9.95

A comparison of handguns, including Luger, Savage, Colt, Webley-Fosbery and other makes.

**Ruger "P" Family of Handguns, The,** by Duncan Long, Desert Publications, El Dorado, AZ, 1993. 128 pp., illus. Paper covers. \$14.95

A full-fledged documentary on a remarkable series of Sturm Ruger handguns.

**Ruger .22 Automatic Pistol, Standard/Mark I/Mark II Series, The**, by Duncan Long, Paladin Press, Boulder, CO, 1989. 168 pp., illus. Paper covers. \$16.00

The definitive book about the pistol that has served more than 1 million owners so well.

**Semiautomatic Pistols in Police Service and Self Defense, The**, by Massad Ayoob, Police Bookshelf, Concord, NH, 1990. 25 pp., illus. Soft covers. \$11.95.

First quantitative, documented look at actual police experience with 9mm and 45 police service automatics.

**Shooting Colt Single Actions**, by Mike Venturino, Livingston, MT, 1997. 205 pp., illus. Paper covers. \$25.00

A definitive work on the famous Colt SAA and the ammunition it shoots.

**Sig Handguns**, by Duncan Long, Desert Publications, El Dorado, AZ, 1995. 150 pp., illus. Paper covers. \$19.95

The history of Sig/Sauer handguns, including Sig, Sig-Hammerli and Sig/Sauer variants.

**Sixgun Cartridges and Loads**, by Elmer Keith, reprint edition by The Gun Room Press, Highland Park, NJ, 1984. 151 pp., illus. \$24.95

A manual covering the selection, use and loading of the most suitable and popular revolver cartridges.

**Sixguns**, by Elmer Keith, Wolfe Publishing Company, Prescott, AZ, 1992. 336 pp. Paper covers. \$29.95. Hardcover \$35.00

The history, selection, repair, care, loading, and use of this historic frontiersman's friend—the one-hand firearm.

**Smith & Wesson's Automatics**, by Larry Combs, Desert Publications, El Dorado, AZ, 1994. 143 pp., illus. Paper covers. \$19.95

A must for every S&W auto owner or prospective owner.

**Spanish Handguns: The History of Spanish Pistols and Revolvers**, by Gene Gangarosa, Jr., Stoeger Publishing Co., Accokeek, MD, 2001. 320 pp., illustrated. B & W photos. Paper covers. \$21.95

**Standard Catalog of Smith & Wesson; 2nd Edition**, by Jim Supica and Richard Nahas. Krause Publications, Iola, WI: 2001. 2nd edition. 272 Pages, 350 b&w photos, with a 16 page color section. Pictorial Hardcover. \$34.95

Clearly details 775 Smith & Wesson models, knives, holsters, ammunition and police items with complete pricing information,

illustrated glossary and index.

**Star Firearms**, by Leonardo M. Antaris, Davenport, IA: Firac Publications Co., 2002. 640 pages, with over 1,100 b/w photos, 47 pages in full color. Hardcover. \$119.95

The definitive work on Star's many models with a historical context, with a review of their mechanical features, & details their development throughout production plus tables of proof marks & codes, serial numbers, annual summaries, procurements by Spanish Guardia Civil & Spanish Police, exports to Bulgaria, Germany, & Switzerland during WW2; text also covers Star's .22 rifles & submachine guns & includes a comprehensive list of Spanish trade names matched to manufacturer for arms made prior to the Spanish Civil War (1936-1939).

**Street Stoppers: The Latest Handgun Stopping Power Street Results**, by Evan P. Marshall & Edwin J. Sandow, Paladin Press, Boulder, CO, 1997. 392 pp., illus. Paper covers. \$42.95

Compilation of the results of real-life shooting incidents involving every major handgun caliber.

**Tactical 1911, The**, by Dave Lauck, Paladin Press, Boulder, CO, 1999. 152 pp., illustrated. Paper covers. \$22.00

The cop's and SWAT operator's guide to employment and maintenance.

**Tactical Pistol, The**, by Gabriel Suarez with a foreword by Jeff Cooper, Paladin Press, Boulder, CO, 1996. 216 pp., illus. Paper covers. \$25.00

Advanced gunfighting concepts and techniques.

**Thompson/Center Contender Pistol, The**, by Charles Tephens, Paladin Press, Boulder, CO, 1997. 58 pp., illus. Paper covers. \$14.00

How to tune and time, load and shoot accurately with the Contender pistol.

**.380 Enfield No. 2 Revolver, The**, by Mark Stamps and Ian Skennerton, I.D.S.A. Books, Piqua, OH, 1993. 124 pp., 80 illus. Paper covers. \$19.95

**Truth About Handguns, The**, by Duane Thomas, Paladin Press, Boulder, CO, 1997. 136 pp., illus. Paper covers. \$18.00

Exploding the myths, hype, and misinformation about handguns.

**Walther Pistols: Models 1 Through P99, Factory Variations and Copies**, by Dieter H. Marschall, Ucross Books, Los Alamos, NM. 2000. 140 pages, with 140 b & w illustrations, index. Paper Covers. \$19.95



This is the English translation, revised and updated, of the highly successful and widely acclaimed German language edition. This book provides the collector with a reference guide and overview of the entire line of the Walther military, police, and self-defense pistols from the very first to the very latest. Models 1-9, PP, PPK, MP, AP, HP, P.38, P1, P4, P38K, P5, P88, P99 and the Manurhin models. Variations, where issued, serial ranges, calibers, marks, proofs, logos, and design aspects in an astonishing quantity and variety are crammed into this very well researched and highly regarded work.

**U.S. Handguns of World War 2, The Secondary Pistols and Revolvers,**  
by Charles W. Pate, Mowbray Publishers, Lincoln, RI, 1997. 368 pp., illus.  
\$39.00

This indispensable new book covers all of the American military handguns of W.W.2 except for the M1911A1.

# EXPERIENCE THE QUALITY OF A SIG



Noted firearms training expert Massad Ayoob takes an in-depth look at some of the finest pistols on the market. If you own a SIG-Sauer pistol, have considered buying one or just appreciate the quality of these fine pistols, this is the book for you. Ayoob takes a practical look at each of the SIG-Sauer pistols including handling characteristics, design and performance. Each gun in every caliber is tested and evaluated, giving you all the details you need as you choose and use your SIG-Sauer pistol.



**kp** krause publications  
888-457-2873 • [www.krause.com](http://www.krause.com)

ISBN: 0-87349-755-4 \$27.99 U.S.  
GDSIG (\$41.99 CAN)

